Clinical Lecture
ON A
CASE OF PRIMARY HÆMORRHAGE INTO THE SPINAL CORD.

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GENTLEMEN,—In the first of a short course of clinical lectures which I propose to give during this summer session, I shall bring before your notice an instance of a very rare disease—primary hæmorrhage into the spinal cord. How infrequent it is you may judge from the following extracts:—"Sanguineous apoplexy of the spinal cord. The older writers spoke of this in order to account for the occurrence of sudden paraplegia; but the event must be excessively rare, as I have never seen a well-marked fatal case of it" (Lectures on Diseases of the Nervous System, by Dr. Wilks). "Primary hæmorrhage into the spinal cord, sufficient to produce symptoms, is a very rare disease, and it is even more rare than is suggested by the cases now and then recorded as such.....It is certain that the history of primary hæmorrhage has been largely written from uncertain data, and will need extensive revision when a sufficient number of exact observations have been accumulated" (Gowers). "As a primary lesion this is very rare, so rare indeed that Charcot and Hayem have recently expressed doubts as to whether it has ever been observed, and have endeavoured to show that in all the cases which have been recorded as examples of it there was an acute central softening, the result of myelitis" (Fagge). "In the large hæmorrhages it seems at present quite doubtful whether the affection is a primary idiopathic hæmorrhage, and not rather a hæmorrhagic myelitis. We are decidedly of opinion, particularly on the ground of clinical symptoms, that primary hæmorrhage of the cord also occurs" (Ziemssen's Cyclopædia). The less frequent a disease the less opportunity we have of studying it, and the less ready we are to diagnose it. I think there were other reasons, which I shall presently put before you, why we failed to recognise the disease in the present case; and it is largely because we did fail that I bring it before you; for it has often been said with great truth that we learn more by our failures than by our successes, always provided that we have done our best, so that the circumstances attending the failure may make a striking impression upon our minds.

J. S——, a schoolboy aged thirteen, was admitted into Arthur ward under my care on Jan. 10th and died on Jan. 15th, 1891. His family history was particularly good, and his own showed him to be a healthy member of a healthy stock. The account of the illness which brought him to the hospital was not as clear as one could have desired, but what the boy told me was that he had been skating and had had a good many falls, of which he thought very little. The last one he had was a heavier one, and occurred three days before admission; but he did not at the time of it feel hurt, though he left the ice, thinking he had had enough skating. He walked home, and it was only on getting there that he felt pain in his left shoulder, abdomen, and legs. This was succeeded by gradual loss of power in his lower extremities, so that after an interval of two hours he could not walk and had to be carried to bed. There he remained for two days, and was then brought to the hospital. On admission, he was found to be a somewhat delicate-looking lad, complaining of pain in the abdomen and legs, inability to move the latter, of great thirst, and retention of urine. The pulse was 144 in the minute and weak, but there was no evidence of cardiac disease. Bronchitic sounds were heard pretty generally over the lungs. The bladder was found to be distended, reaching very nearly as high as the umbilicus. The abdominal viscera were healthy, but the bowels had not been opened for four days. The urine was acid, sp. gr. 1012, and contained no albumen. The temperature was 101·8° F. On examination of the spine, no tenderness on percussion or deformity was found. The legs were completely paralysed, and sensation was impaired in them, and, indeed, upwards as far as the fourth or fifth dorsal spines. The upper limit of anæsthesia on the right passed from this point, sloping forwards in the direction of the ribs, and reaching the level of the sixth rib in front; on the left it reached the level of the fifth; there was just above the line of anæsthesia a small zone of hyperæsthesia. Some numbness was likewise complained of in the left hand. The knee-jerk on the right was completely absent; on the left it was present, but not well marked. No ankle or patella clonus. Abdominal and cremasteric reflexes were absent; plantar fairly brisk. Pupils were both small, and did not contract to light. During the rest of his life, which terminated on the 15th after an illness of eight days, the bronchitic sounds increased in number; pneumonia of the left lung supervened on the 13th, and the right became affected a little later; respiration was rapid, reaching 36 in the minute. The pulse to the end was greatly accelerated, being never less than 140 in the minute, and reaching 160 before death. He had persistent retention of urine, and his bowels were very confined. His temperature was persistently high, reaching 104°, and nearly 105° F. The pain in the left arm and shoulder continued, and definite loss of power in that arm subsequently supervened. He was also much troubled with bad pain in the head. The paralysis of the legs remained complete, but the anæsthesia became less, and was finally only patchy. No optic neuritis was present. The right patellar reflex remained in abeyance and the left varied, being sometimes absent and sometimes present. From time to time he was troubled with painful twitchings and spasms in the affected limbs. He died on the eighth day of his illness.

Necropsy (performed by Dr. Hadden): Body fairly nourished; no sign of external injury to back. Brain much congested all over the surface: puncta cruenta unusually prominent. Grey matter congested. A little stickiness over the chiasma was evident on removing the brain, but no other sign of meningitis. Medulla oblongata normal. No hæmorrhage and no apparent degeneration. Spinal cord: No bruising, laceration, or hæmorrhage found affecting the spine or its membranes. The pia mater, front and back, was much congested, but free from lymph. At the level of the third dorsal pair a hard localised swelling was felt, and the cord here was bulged. Above and below the cord felt soft, and the surface had a slightly yellow tinge. On making a section an extravasation of blood was found occupying nearly all the transverse extent of the cord. A little of the white and grey matter on the right side only could be made out. The blood was coagulated and slightly decolourised at one spot. Above the hæmorrhage as far as the upper cervical region and below as far down as the mid-dorsal region the anterior and posterior cornua of the grey matter on the left side were converted into a cavity containing liquid black blood. The white matter was unaffected. The lumbar and sacral regions of the cord were normal. The heart was free from disease. Lungs: The left lower lobe was solid, dull red in colour, and nodular on section, being in the red stage of broncho-pneumonia. Along the posterior border of the right upper and lower lobes there was also some broncho-pneumonia in a similar stage of development. Liver, spleen, and kidneys were natural. Microscopic examination showed that the hæmorrhage was the only pathological condition present in the cord. There was not the slightest evidence of inflammation or any other disease.

In giving the history of the onset of the attack in the present case I have, perhaps, strained a point somewhat, owing to the light which the post-mortem examination shed upon it. I refer to the rapidity with which the symptoms followed the fall on the ice. The history was particularly difficult to elicit, because the friends tended to exaggerate the falls which the boy had, as they attributed his illness to them, whereas the patient thought nothing of them, as he considered they were no worse than he expected to get, or than he saw his comrades getting. We did not know whose account to believe before death, but naturally after the post-mortem revelations I have rather accentuated the friends' view. In any case the disease, though it showed itself by its symptoms rapidly, did not do so instantaneously. Accepting the falls on the ice as the probable cause, the effect did not supervene for an hour or so, and did not reach its maximum for two or three hours. But the symptoms were, from any point of view, acute, and clearly pointed to one of the acute diseases which affect the spinal cord. First came pain in the abdomen and legs, then rapid and com-

plete paralysis of legs, and retention of urine. On his admission on the fourth day of the disease these symptoms were present, together with constipation, anæsthesia as high as the fourth or fifth dorsal spine, absence of the right knee-jerk, very rapid pulse and respiration, contracted and inactive pupils, a high temperature, and some painful twitching and spasms of the affected limbs. Later paresis of his left arm supervened, and the bronchitic sounds, which were present from the first, gave way to the physical signs of pneumonia. Now let us consider the meaning of these symptoms separately. First of all, there was no evidence, such as local tenderness on percussion or distortion of the spinal column, to suggest any injury to bone; but the fact that the anæsthesia reached as high as the fourth or fifth dorsal vertebra showed that the lesion, whatever it was, was a little above that level. The absolute paralysis of legs and bladder showed that the cord was pretty completely disorganised by the disease. The contracted and inactive pupils would point to the same region as the seat of disease, for this phenomenon pointed to paralysis of the sympathetic nerves supplying the pupil-dilating muscles. Landois and Stirling say: "The cilio-spinal centre connected with the dilatation of the pupil lies in the lower cervical part of the cord, and extends downwards to the region of the first to the third dorsal vertebræ." It is also not at all improbable that the very rapid pulse which the patient had may have been in some way connected with an affection of the accelerator nerves which issue from the upper dorsal region of the cord. Landois and Stirling say that the accelerated fibres of the heart "pass from the medulla oblongata through the spinal cord, and leave the cord through the rami communicantes of the lower cervical and upper six dorsal nerves, to pass into the sympathetic nerve." The rapidity of the heart's action would only be explained by irritation, and not by paralysis of the accelerators. But we must remember that the hæmorrhage was only large enough to completely disorganise the cord about the level of the third dorsal vertebra, and that above and below this level it only occupied a part of the grey matter, and the effect of it in those regions might easily have been irritation rather than paralysis.

It was clear, then, from an analysis of all the symptoms, that one had to deal with an acute destructive disease of cord in the upper dorsal region. The presence of anæsthesia and paralysis of the bladder proved that it could not be limited to the grey matter—could not, in fact, be an anterior poliomyelitis; but must be a lesion which disorganised the whole, or nearly the whole, transverse area of the cord. The only acute diseases likely to do this were a complete rupture of the cord, hæmorrhage into it, or acute myelitis. Now, the only means of diagnosis in such cases, or, at any rate, the important factor in the diagnosis, is the suddenness of the attack. In the case of rupture, of course, it would be absolutely sudden. Speaking of hæmorrhage as opposed to myelitis, Gowers says: "The actual onset is always sudden; the symptoms attain a considerable height in the course of a few minutes. The suddenness of onset is characteristic of the disease. ..... We are not justified in regarding as primary hæmorrhage any case in which premonitory symptoms existed for more than a few minutes, unless those symptoms were so pronounced and sudden in onset that they might have been due to a small extravasation. Initial fever in any case makes myelitis probable." One finds, again, in Ziemssen's Cyclopædia of Medicine: "One specially characteristic feature of spinal apoplexy is the way in which a complete and severe paraplegia will develop in the course of a few minutes or an hour. ..... In diagnosis, the main difficulty is with central myelitis. The only point of distinction consists in the rapidity with which the symptoms develop. The paraplegia requires hours or days in simple myelitis, in hæmato-myelia minutes or quarter-hours." Dr. Frederick Taylor says the onset is sometimes quite sudden; in other cases the symptoms may be more gradually developed in the course of a few hours. Symptoms are subsequently those of acute local myelitis. The diagnosis depends on the sudden onset of the symptoms. Prodromal symptoms of even very short duration and fever make myelitis probable.

In the case with which we had to deal the symptoms appeared to take hours, and not minutes, and in addition fever was present. Consequently the conclusion arrived at was that the case was probably one of acute myelitis. The fever, however, was misleading; for it probably depended upon a commencing pneumonia, and it increased as the latter became more extensive. What was the cause of the pneumonia? I think it probably depended directly upon the nerve lesion. In Quain's Anatomy you will find it stated that "behind the root of the lung the pneumogastric nerve becomes flattened, and gives several branches of much larger size than the anterior branches, which, with the filaments derived from the second, third, and fourth thoracic ganglia of the sympathetic, form the posterior pulmonary plexus." Trophic lesions, as they are generally called, occur not infrequently in the case of injury or inflammation of the peripheral or central nervous system. In the case of acute myelitis affecting the lower parts of the spinal cord the alteration in the capabilities of tissues to resist the most ordinary pressure is shown in the acute central bedsores which form over the sacral region, on the heels, and other parts which are subjected to pressure as the patient lies in bed. With the retention or incontinence of urine one often sees acute cystitis and suppurative nephritis making their appearance, and adding greatly to the perils of the myelitis; and yet in cases in which there is a similar affection of bladder without cord disease these inflammations do not ordinarily occur. Hence acute bedsores and acute cystitis are looked upon as effects of altered nutrition owing to the nerve lesion. Again, in the disease called herpes zoster, a superficial inflammation of skin occurs in the course of the affected nerve; or it may sometimes happen that the inflammation affects the tissues much more deeply placed. Speaking of this subject, Sir James Paget says in his "Studies of Old Case-books": "Ordinarily, with considerable preceding or associated pain, there is only so much local necrosis as is expressed in the death and separation of the epidermis of the minute vesicles and the shallow ulceration indicated by the little scars; but this ulceration may be deep, and I have seen one case in which, with herpes in the range of the second division of the right fifth nerve, there was necrosis of the portion of the alveolar border of the upper jaw, and of all the teeth receiving branches from that nerve." The rapid atrophy and nutritive changes which occur in infantile paralysis, alcoholic paralysis, and other nerve diseases, belong to the same class. Considering how rapidly the patient under consideration developed broncho-pneumonia, having apparently no predisposition to chest disease, I cannot but think that this inflammatory affection may be put down to the injury to nerves proceeding from the site of the hæmorrhage to the lungs. It is interesting to note with reference to this point that the grey matter of the cord was far more extensively disorganised on the left than on the right side, and the left lung was the seat of a much more complete and widespread inflammation than the right. The fact that the left arm was partly paralysed while the right remained free, finds its explanation in the extension of the hæmorrhage in the grey matter upwards and downwards on the left and not on the right. Another interesting point in this case is the total and permanent disappearance of the right knee-jerk. You often have the increase in the tendon reflexes pointed out to you in the wards as occurring when a lesion involves the lateral columns of the cord above the lumbar enlargement, so that the lumbar centres and fibres remain intact. This alteration of the knee and other reflexes in the way of excess is looked upon as being due to the interruption of the communication between the intracranial centres and those in the anterior cornua of the cord, the connecting fibres which run in the antero-lateral columns of the cord being disorganised. This condition of affairs is certainly the rule even in very severe destructive lesions high up in the cord, and I think I have myself met with increased reflexes, and finally tonic spasm of the limbs, where there was no clinical evidence of the passage of either sensory or motor stimuli through the cord. Lately, however, very strong evidence has been adduced (by Bastian, Bowlby, and others) to show that in complete transverse lesions, such as occur from accidents or softening of the cord, reflexes, both deep and superficial, are completely abolished so soon as all nerve conduction between the brain and lumbar centres comes to an end. The disappearance of one knee-jerk in the present instance may therefore be supposed to depend on conditions similar to those existing in other sudden lesions of the cord. In curious contrast to cerebral hæmorrhage, spinal hæmorrhage occurs mostly between the ages of ten and forty. Why this should be so it is at present impossible to say; for its occurrence one at least of three conditions

seems to be necessary: disease of vessels, sudden hyperæmia, or violence. In scurvy and small-pox, for instance, disease of vessels probably plays the most important part, as it does also in myelitis when complicated by hæmorrhage. Sudden hyperæmia appears to be the effective cause in those cases which arise in connexion with exposure to cold, extreme physical exertion, and sudden alterations of atmospheric pressure, such as occur in the case of divers. Finally, in cases such as the one I have taken for the subject of this lecture a strain or injury seems to produce the accident without causing any tangible alteration in the bones or spinal membranes, but in what manner it gives rise to hæmorrhage is not very clear. The case which I have now brought before your notice is the first I have met with in which simple primary hæmorrhage of the cord has been shown by post-mortem examination to have the lesion which has proved fatal.

ON BLOODLETTING.

BY SAMUEL WILKS, M.D., F.R.S.

DR. OGLE having given you in an interesting communication his opinion on the value of bloodletting, I should in like manner be pleased to offer you my own experience, which is highly confirmatory both of his and that of Dr. Pye-Smith, Dr. Broadbent, and other eminent medical men. During the whole of my professional life I have occasionally used bloodletting as a remedial measure, and have probably adopted venesection in about thirty cases. In some lectures on Chest Diseases, published many years ago, for the use of students, I said, "As regards bleeding, there cannot be a doubt that in former times, from the truthful character of the records, its use was often attended with a strikingly good result. We read of persons sitting up in bed with great oppression of breathing, their faces gorged with blood, and the surgeon coming in with his lancet, bleeding in a full stream, and immediately quieting the respiratory process and relieving the circulation. In such cases there may have been pneumonia, bronchitis, or heart disease, but the results were nevertheless the same. This seems to show that in cases of great engorgement of the lungs or of the right side of the heart bleeding will afford relief, and therefore in similar circumstances I should advise you to have recourse to the measure. When you find the venous system gorged in primary affections of the lungs, or in secondary congestions, as in heart disease, or from paralytic conditions, as in apoplexy, you cannot be wrong in bleeding; you relieve the venous system as well as the heart, and allow the circulating apparatus to right itself. The objection sometimes made that the patient is too weak, as indicated by the pulse, is futile, since, owing to the small amount of blood which reaches the left ventricle to be propelled onwards, the pulse is naturally small." Again, in my lectures on "Diseases of the Nervous System," I devote several pages to the consideration of bloodletting and its use when the lungs are gorged from paralysis of the chest or other cause. I may make the following quotation:—"Many of you saw the case of epilepsy which one of my clerks bled a few months ago. The man was a strong agricultural labourer, and came here suffering from severe epileptic fits. One afternoon, on going round, we were informed that he had never been out of a fit for four hours. We found him lying in bed with constant convulsive movements, but the most striking and alarming condition was the engorgement of the lungs and increasing lividity of the surface of the body. I requested that he should be bled, and one of you, wishing to distinguish himself at his first attempt, or from the lancet being over-sharp from disuse, fulfilled my object to the utmost; the blood poured out in a torrent, the face rapidly became pale, the man opened his eyes and spoke for the first time since the morning, the interval having been a blank to him. The effect was the most striking I have ever witnessed, and it is worthy of note also that he had no fit for a long time afterwards."

It was very early in my student days that I was impressed with the value of bloodletting. I accompanied a general practitioner to see a little boy suffering from bronchitis after whooping-cough. He was lying half raised on a pillow gasping for breath, his face livid, eyes starting out of his head, and the superficial jugular making itself most apparent. The doctor, after gazing at this vein and feeling it, pulled out a lancet, and in spite of the protestations of the father opened it and let out several ounces of blood. The lividity passed away, the child sank back on the pillow in a tranquil sleep, and from that time speedily recovered. I have no records by me of the cases in which bleeding was adopted, but certain instances are deeply rooted in my memory. For example, a young woman was brought into the hospital in a dying state, gasping for breath, and livid; there was a mitral bruit, engorgement of the lung with hæmoptysis, albuminous scanty urine, and dropsy. We bled her from the arm, and the effect was immediate, the breathing became tranquil, lividity passed from the face, and improvement continued from that time. In cases of uræmic convulsions the effects of bleeding are very striking; the right heart is relieved, and poisoned blood is removed from the system. One case of this kind, indelibly fixed in my memory, is that of a neighbouring dressmaker, who, I believe, is still alive. I was asked a few years ago to see this patient early one morning by her medical attendant as a satisfaction to him and her friends; she had been in convulsions all night, but he did not wish to disturb me before daybreak, believing the case to be hopeless. I found a middle-aged woman in constant convulsive movements, froth issuing from her mouth, quite comatose, and almost pulseless. The whole body was livid and the extremities cold. The doctor said she was dying, and allowed me therefore to bleed her. I took away a small wash-hand basin of blood, and while flowing the lividity passed off, the convulsions ceased, the body gradually became warmer, and when I saw her in the middle of the day she was calm, and conversed with me. Her life was as clearly saved by the bleeding as if I had dragged her drowning out of the water; and this is more than I can say from the use of drugs. Dr. Ogle writes that little was said at the discussion about the use of leeches and cupping. I can remember a good example of treatment by each method. I was once asked to see a well-grown child a year old suffering from inflammation of the lungs. He was lying on his mother's lap, respiration being from 50 to 60 a minute, with deep episternal and hypogastric depression, inflated nostrils, lips blue, &c. The medical man said he formerly should have leeched, but now waited for my sanction. I assented, and two leeches were applied. Believing that the child was too far gone to be relieved by any measures whatever, I was much surprised to be requested to see him again on the following day. I then found him breathing tranquilly, and comparatively well. The leeches had taken, and the bleeding had continued some time afterwards—in fact, much more than the medical man desired. It was, however, effectual.

As regards cupping, I have seen it so often done in former years in hospital practice with advantage that I cannot recall any individual cases, but the last case in private in which I saw cupping performed was in consultation with Mr. Parrott of Clapham shortly before his death. The patient was a middle-aged, stout woman, the subject of chronic bronchitis. She was sitting up in bed with great dyspnœa, no expansion of lower part of lung, and considerable blueness of the face. Mr. Parrott said in former years he should have cupped her, and informed me that he had paid special fees to Mr. Hills of Guy's Hospital to learn the art, and he considered himself an adept. I willingly consented. He hastened home, brought his glasses, and applied them *secundum artem* (four in number) between the shoulders. He commented on his dexterity, and how he had removed the cups without leaving a drop of blood on the skin or the linen. We all stood in admiration at his adroitness, and gazed alternately at the relieved countenance of the patient and the satisfied expression of the doctor. Although she was not *in extremis* I believed the cupping saved her life, as she was daily growing worse.

I wish we had a more simple means of relieving the gorged portal system than incising the liver, as recommended by Dr. George Harley. Everyone must have seen the relief to the patient with cirrhosis after hæmorrhage from the bowels. One case I shall never forget. A middle-aged woman, an inebriate, was when I was asked to see her in an apparently dying condition. She had a very large liver, was covered with purpura spots, and was bleeding from the gums and mouth. The consultation was a mere formal one, and therefore I was much surprised to hear that she was still alive two days afterwards, and that I was requested to see her again. I did not recognise her, so altered was her appearance; her blotchy face had become pale, and while

regarding her I was asked to look at a row of four chamber vessels arranged along the wall of the room. They were all full of dark blood. The melæna saved her life, and she lived, I was told, some time afterwards. Besides the mere question of the value of bleeding in the mind of a medical man, there are two other considerations which influence him in his procedure. There is first his own personal reputation to be thought of, for just as the fashion of our forefathers was to "knock down" disease by every lowering measure, so the modern fashion is to "support" the patient. Consequently, if the latter died after bleeding, the doctor knew he would be blamed; but if he killed his patient by over-feeding, alcohol, or drugs, he would be thanked as having done his best. The other objection to bleeding which many men have is that they do not know how to do it; much less can they cup. I am sorry to say that I have usually had to perform the simple operation of venesection myself.

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A CASE OF GASTRO-ENTEROSTOMY FOR PYLORIC CANCER.

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THE case is of interest as showing how safely and easily gastro-enterostomy can be performed, and how it is capable of prolonging life in cases unsuitable for the more radical operation of pylorectomy. In this instance the malignant disease had involved not only the pylorus, but the first and second parts of the duodenum, it being therefore far too extensive for removal. The case also illustrates the advantage of performing gastro-enterostomy by means of decalcified bone plates, since the operation can be performed very quickly. If this patient had had to submit to the old operation of gastro-enterostomy by means of a double row of sutures, I feel sure she would not have survived, as she was in an extremely exhausted state before being operated on. I would draw special attention also to the method employed in clamping the bowel, which I have found of great service in many operations of a similar nature, and which I first mentioned in connexion with my case of cholecysto-enterostomy. I refer to the use of a simple elastic tourniquet in the shape of a piece of drainage-tube which is wound once round the isolated and emptied bowel, one knot being tied, and the two ends being seized with pressure forceps. So long as the tourniquet is on, the bowel is rendered bloodless, and there is not the slightest danger of the escape of gas or fæces. As soon as the necessary manipulations are effected, the pressure forceps are released and the single knot at once unties itself. By this means much time is saved. The case is also of interest from the age of the patient, which was only twenty-seven; this led me to hope that the stricture might be of a simple nature.

Miss G——, aged twenty-seven, consulted my brother, Mr. Herbert J. Robson, on March 20th, 1890, on account of a tumour in the epigastrium, accompanied by pain, sickness, and vomiting, the pain and sickness being usually worse after food, but coming on at times quite independently of diet. She stated that she had been well up to the middle of February, when she began to have shooting pains in the region of the stomach, lasting usually about half an hour, and coming on at intervals of two or three hours. This continued for three weeks, when the tumour was noticed in the epigastrium, and on the appearance of the tumour the pain became somewhat relieved, but at that time the nausea and vomiting began. Exertion caused an aggravation of the symptoms. From the commencement of her illness up to the time of being seen she had gradually lost flesh. The tumour was situated in the middle line, midway between the umbilicus and ensiform cartilage; it was about the size of a small orange, tender on pressure, hard, nodular, and freely movable; it rose and fell with respiration, and had communicated to it the pulsation of the aorta. On April 3rd she had further lost flesh, and complained of persistent vomiting, with occasional offensive eructations. On the 10th I saw her for the first time with my brother, and we advised her to go into the infirmary for operation. On admission to the infirmary on April 17th her symptoms still continued, but it was noticed that the epigastric swelling became at times hard and prominent and afterwards flattened out, then being less distinct. On some occasions the hardness extended to the whole of the stomach, the shape of which could then be clearly seen through the abdominal walls. The following report was given by Dr. Light, resident medical officer:—"Vomited matter, reaction acid, free hydrochloric acid present; no sarcinæ found. Signs of consolidation in the right apex of the lung." On April 29th a note was made, to the effect that the patient was vomiting several times each day. On several occasions splashing sounds were heard on percussing the abdomen from side to side. On April 30th, under the influence of ether, the abdomen having been thoroughly cleansed and asepticised, and the stomach previously washed out with a solution of boro-glyceride, an incision was made in the middle line from about two inches below the sternum to the umbilicus. The peritoneum having been opened, the stomach at once came into view. It was then found that the swelling occupied the pyloric end of the stomach and the first and second parts of the duodenum, so that pylorectomy was quite out of the question. It was therefore determined to perform gastro-enterostomy. The omentum was raised and the attached part of the jejunum easily found and traced downwards for a few inches; a loop of the bowel was then brought forward by the right finger and thumb and emptied of its contents by the pressure of the left finger and thumb, and then encircled by a thin piece of elastic tubing, which was tied once and then seized with pressure forceps. The bowel was not only emptied of its contents, but was rendered bloodless, so that when it was opened at a convenient spot of its anterior surface, by an incision in its long axis sufficiently large to admit the decalcified bone plate, there was neither fear of extravasation nor of bleeding. A similar plate was introduced into the stomach. The upper and lower stitches of the two plates were made to pierce the walls of the stomach and bowel respectively, the right and left stitches being brought out through the openings in the stomach and bowel. On tying the plates together the jejunum and stomach seemed to be closely applied; but in order to render the parts more secure, six Lembert's sutures of thin silk were used to stitch the viscera together, just external to the bone plates. In order to prevent the bowel kinking, an extra suture fixed it to the stomach wall about an inch from the edge of the plate. No soiling of the peritoneum occurred throughout the operation, and the external wound was closed in the usual way with silk sutures. After the operation the patient complained of a little pain, and vomited a quantity of dark-coloured fluid which contained blood. On May 3rd the patient vomited twice, but there was no blood in the vomit, which, however, smelt slightly offensive, as if there might be some regurgitation of bowel contents through the artificial opening. The patient had no pain. On the 4th she still felt sick, but vomiting was controlled by half a grain of morphia given in the morning. She had nutrient injections thrice daily, and was able to take a little champagne and milk and soda-water by the mouth. On the 7th a note was made that the patient was improving every day. On the 8th there was no sickness; the wound was dressed and found to be healed by first intention. All the sutures were removed. The temperature had never been above the normal. She could then take a cup of tea and milk and soda-water by the mouth. On the 15th she could take oysters, bread-and-butter, and tea. On the 17th there was a little vomiting; but on the 19th she was able to take solid food and did not vomit. The patient was allowed to get up on the 26th. On the 29th her weight was only 5st. 4lb., although she was taking more food and only vomited occasionally, not more than once in the twenty-four hours. On June 5th she had gained a pound in weight during the week, and on the 10th a note was made that the general condition was improving, although there was a little vomiting. She was sent to the Ida Convalescent Home. On July 8th the following note was made by Mr. Hudson, the resident medical officer of that institution:—"Since the patient's admission to the Ida Home she has made no progress. Has vomited once or twice daily, and has lost weight. She has got up every day and has been able to take light diet, chiefly of a liquid character, but also solid food, such as bread-and-butter, fish, &c. Besides the nourishment of which she has

taken and retained a fair quantity by the mouth, she has been having nutrient enemata thrice daily. The tumour can be plainly felt, has increased in size, and now extends well under the costal margin on both sides." She returned to her home on July 9th, and in August I received a note from her medical man in London to say that she had died from exhaustion on Aug. 3rd; but unfortunately a post-mortem examination had not been obtained.

Remarks.—So far as the operation is concerned, it effected what was required of it, and food was able to pass on into the bowel during the three to four months between the operation and the death of the patient from exhaustion due to the cancer, which had extended considerably before she left the Convalescent Home. Had the case been one of simple stenosis, unsuitable for Loreta's operation, the ultimate result would probably have been complete restoration to health.

Leeds.

KOCH'S TREATMENT AT THE ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, VENTNOR.

BY J. G. SINCLAIR COGHILL, M.D., F.R.C.P. EDIN.,
SENIOR PHYSICIAN TO THE HOSPITAL.

(*Continued from page 1088.*)

CASE 4.—Lily E. W——, shop assistant, unmarried. Strumous diathesis; anæmic; sallow complexion. Admitted Nov. 5th, 1890. Height 5 ft. 5 in.; weight before inoculation 8 st. 10 lb. 8 oz. Menstruation regular. Thyroid enlarged; had pleurisy in right side seven years ago; has had "severe colds" latterly. In the summer of 1890 she began to feel weak and languid, with slight cough. Early in September she had hæmoptysis to ten ounces, and repeatedly to end of month, but not to such an amount. Since then always had cough, with "greenish" expectoration, and increasing dyspnœa. There were until last week heavy night sweats. Condition before inoculation: Slight cough and expectoration (two drachms), containing sparsely scattered bacilli, with dyspnœa, palpitation, and severe pain at times in the right apex. Sleepless; appetite poor; no pyrexia; urine, sp. gr. 1014, pale and turbid (leucorrhœal), with faint haze of albumen. Pulse 80, and regular. First sound reduplicated in mitral and pulmonary areas. Systolic bruit replaces first sound, and the second sound is accentuated. Respiration 26 per minute. Physical signs: Right lung, anteriorly, impaired percussion note to third rib, with prolonged expiratory murmur and increased vocal resonance; amphoric breathing and pectoriloquy immediately above scapula; posteriorly, note impaired to middle of scapular region, with loud bronchial breathing in supra-spinous fossa. There are no moist sounds. Left lung: Anteriorly movement deficient at apex, percussion note good, respiration prolonged and vocal resonance increased above clavicle and posteriorly in supra-spinous fossa. Patient was inoculated with 0·001 grm. of lymph about 10 A.M. on Dec. 27th, 1890. Reaction very marked; at midnight temperature 102·4°, respiration 32, and pulse 120. Pains in knees and ankles. Expectoration slightly increased. Pain at right apex. To March 24th the patient had twenty inoculations, increased gradually to 0·08 grm., equal to 0·4224 grm. of tuberculin. The highest temperature recorded was 103°, after the third injection of 0·002 grm. Although there was characteristic evidence of reaction in the subjective and objective conditions, the highest temperature recorded after the eighth inoculation was 99·4°. The highest temperature was observed at 6 P.M., on thirteen of the twenty injections. After the inoculation of 0·005 grm. on Jan. 12th the expectoration amounted to one ounce, and contained a few bacilli, and a large number of segmented bacteria which took the methyl blue stain. Within thirty-six hours the expectoration was reduced to one drachm. Very frequently the expectoration increased to one ounce in the twenty-four hours after inoculation. Menstruation was fourteen days late in January, not appearing until the 21st. Condition on leaving, April 7th, 1891: Weight, 9 st. 2 lb., a gain of 5 lb. 8 oz. since inoculation, or of 8 lb. 14 oz. on lowest weight on Jan. 11th. There has been a loss of 2 lb. 2 oz. since March 9th, owing to neuralgic toothache involving confinement in-doors. The patient says she is feeling very much better in herself, "and as strong as ever." No cough and very little expectoration. No sweating. No dyspnœa except on going quickly uphill. Appetite good, tongue clean, and all functions regular. Complains of a creaking in left knee on going upstairs. On examining the heart, there is reduplication of the first sound and slight accentuation of the second in all areas. There is a systolic bruit with the first sound in the mitral area. The right lung: movement and expansion very good. At apex vocal resonance still exaggerated, also the vocal fremitus. The note is impaired to the second rib. A very occasional click may be heard at the extreme apex. The inspiration is harsh to second interspace, and amphoric in character; and this condition, in a modified degree, may be heard at the left apex also.

CASE 5.—Ellen N——, aged twenty-seven, unmarried. Dark, sallow complexion, and stout, flabby build; very anæmic and markedly neurotic. Height 5 ft. ¾ in.; weight 8 st. 9 lb. 6 oz. Father died of pneumonia, mother of asthma and bronchitis. Ellen N—— had pleurisy and pneumonia of left lung six years ago, and influenza in 1890. Ever since the pneumonia she has had attacks of hæmoptysis, expectoration only after these, with slight cough. Patient came to the hospital as a probationer nurse in October, 1890. About a month after, she complained of pain in the left base, and had considerable hæmoptysis. When examined for the first time she was reported to have "chronic phthisis" at right apex and commencing changes at left apex. She had had night sweats for the last three months; more severe after this last attack in the hospital. Menstruation regular, but painful and scanty. Complains of dyspnœa, dry cough morning and evening, occasional darting pains in lungs, occasional perspiration, and frequent headaches. Condition before inoculation: Pulse 108, fairly good; heart sounds audible at left base posteriorly, first sound reduplicated in mitral area, second pulmonary sound accentuated; urine, sp. gr. 1025, mucous deposit and haze of albumen; respiration 27 per minute. Physical signs in lungs: Right, in front slight flattening at apex; vocal fremitus increased under clavicle; percussion note impaired from apex to second rib; expiration prolonged, and vocal resonance exaggerated to third rib; breathing cavernous with pectoriloquy immediately below clavicle; posteriorly corresponding signs, with occasional clicks on inspiration in scapular region. In left lung percussion note fairly good over upper half, but expiration prolonged and vocal resonance increased above clavicle; similar signs in supra-spinous fossa; movement diminished at base and breath sounds muffled, with slight dulness at extreme base posteriorly. The patient was inoculated with 0·001 grm. of tuberculin at 10 45 A.M. on Dec. 27th. The temperature rose to only 100·4° at 9 P.M., but there were very well marked indications of local reaction. On examination all the physical signs were more accentuated and painful, moist crepitations were detected in the excavation at right apex; pleurisy of right base was set up, which soon subsided. There was throughout the treatment of this case much headache, pain in limbs, joints, abdomen, and in the chest. The highest rise of temperature (103·4°) was on Jan. 8th, from 0·003 grm. of lymph. The thermometric ranges were very irregular in this case all through the treatment. To March 24th seventeen inoculations were given, rising from 0·001 grm. to 0·007 grm., equal to 0·3185 grm. of tuberculin. This patient lost weight steadily to Jan. 31st, when she weighed only 8 st. 11 lb. 7 oz. Condition on leaving, April 1st, 1891: Weight 8 st. 8 lb. 2 oz. This shows a loss of 1 lb. 4 oz. on her original weight, but a gain of 6 lb. 9 oz. on the lowest weight on Jan. 31st. The patient was gaining rapidly before leaving, and will probably continue to do so. Her general condition has very much improved in every respect; expresses herself as feeling "vastly better." There is no anæmia, and the puffy look is gone, but she still complains of occasional pains here and there. Very little cough and expectoration, and only a few doubtful bacilli seen. Physical signs in lungs: Right, anteriorly, flattening at apex, with increased local fremitus. Percussion note impaired to second rib. Expiration prolonged, and vocal resonance increased to first interspace. Marked bronchophony and pectoriloquy under middle third of clavicle. Corresponding signs posteriorly to spine of scapula are present. Left lung: Note impaired to first rib and below sixth rib at anterior of axilla. Breath sounds at base distant, and a faint crepitation heard at the end of deep inspiration. Posteriorly there are dulness and increased

vocal resonance in supra-spinous fossa and below the angle of the scapula. Urine contains not a trace of albumen. The patient has gone to resume her occupation as a private nurse. She has quite recently reported most favourably of her health.

CASE 6.—John C. H——, clerk, fair complexion, curly hair, aged twenty-two. Height 5 ft. 6¼ in.; weight 10 st. 1 lb Admitted Nov. 27th, 1890. Previous to June, 1890, had not been feeling well, had a cough, and poor appetite. In June, while camping out with Rifle Volunteers, contracted typhoid fever, complicated with basic pneumonia. Ever since has had much cough, with expectoration, more abundant at times, and occasionally blood-streaked. He has no pain anywhere, and there have been no night sweats. There has been much loss of flesh, but latterly improvement has been going on, though slowly. Condition before inoculation: Pulse 84, and is regular in character; first cardiac sound reduplicated in mitral area, and faint bruit heard in pulmonary area; urine, sp. gr. 1030, acid, with no albumen. Physical signs in right lung: Anteriorly percussion note impaired to second rib, with expiratory murmur prolonged, and vocal resonance increased to third rib. Vocal fremitus is slightly increased at apex. Posteriorly percussion note impaired to middle of scapula, with expiration prolonged, and vocal resonance increased to angle of scapula. Left lung: Movement at apex is deficient Posteriorly fine crepitations below angle of scapula. Expectoration one drachm, tenacious and pigmented. Presence of bacilli doubtful. Patient was inoculated with 0·001 grm. of tuberculin at 10 A.M. on Dec. 27th, 1890 There was no rise of temperature, and the respiration was unaffected. The pulse became larger and softer, and more empty between the beats. The sphygmograph showed a lengthening of the diastolic element, most pronounced at 6 P.M., when the height of the wave had markedly diminished, but the rate increased. The hands sweated on the palmar surface profusely, and this was noticeable in nine of the ten patients after the first inoculation, and occasionally after subsequent ones. To April 7th twenty-two inoculations, gradually increasing to 0·1 grm., were given, equal to 0·6635 grm. of the lymph. The highest temperacure (103·4°) from 0·003 grm. was on Jan. 5th, being the fourth inoculation. The temperature never reached 100° after the eighth inoculation, although inoculations were given once a week, the three last of 0·1 grm. each. This patient showed a tendency to slight reaction, on the day following inoculation the temperature not exceeding 99·2°. Friction sounds and small superficial crepitations, extending especially towards the base of the lungs posteriorly, were noted after injections. When the temperature did not rise, it seemed as if the reaction was expressed by the heart and vascular system, for the first cardiac sound seemed feeble and prolonged, both sounds tending to reduplication, and the pulse, at first dicrotic, became soft, dilated, and slow. Drowsiness was also noticeable under the same condition. Patient weighed 10st. 5lb. 6oz. on April 3rd, but subsequently caught a severe catarrh from exposing himself to the inclement weather while out walking. Condition on leaving, April 10th: Weight 10st. 3lb. 2 oz., a gain of 2 lb. 2 oz. since first inoculation, and a gain of 5 lb 2 oz. on lowest weight recorded, as this patient also lost weight in the earlier period of the treatment. Functions regular, appetite good, no dyspepsia. No sweating or dyspnœa. Hardly any cough or expectoration. No pain anywhere. Pulse quite regular and stronger than before treatment. Chest movement fairly good, but slightly deficient at left apex and right base. Vocal fremitus slightly exaggerated under left clavicle. Right lung: Note good, but rather high pitched above clavicle. Respiratory sounds clear all over lung, except posteriorly, where a few fine superficial crepitations are heard on forced expiration at extreme base. Left lung: Note impaired, and vocal resonance increased to second rib, with prolonged expiration. A few sibilant râles are heard at apex. Posteriorly the percussion note is impaired to middle of scapular region, but the vocal sounds are normal. At the extreme base a few fine crepitations are heard, but less numerous than formerly. Examined April 21st, and physical signs in chest found much improved; no moist sounds heard. Has had no night sweats for some time. Expectoration varying, but, on the whole, very much less than before inoculation.

CASE 7.—Henry C——, aged twenty, schoolmaster, dark complexion, tubercular diathesis. Height 5 ft. 4¼ in.; weight 8 st. 1 lb. 8 oz. Admitted Nov. 21st, 1890. Father and paternal uncle died of phthisis. General health tolerably good. Had inflammation of lungs as a child, and also scarlet fever, which left discharge from right ear, with deafness. Twelve months ago had cough with blood-stained spit. In March was ill for three weeks with influenza. Cough and expectoration continued. There was pain at both apices and night sweats. Has been losing weight since March. Improved after admission, but pain still at left apex, and troubled with dyspeptic pains. Condition before inoculation: Pulse 92, regular; first cardiac sound in mitral area reduplicated, the second sound in pulmonary accentuated; urine, sp. gr. 1032, contains phosphates, but no albumen. Physical signs in right lung: Anteriorly percussion note impaired, with prolonged expiration and increased vocal resonance to third rib. Breathing cavernous to second rib, with bronchophony and pectoriloquy, and a few crepitations on coughing. Posteriorly percussion note impaired to angle of scapula, with prolonged expirations and increased vocal resonance to middle of scapula. Left lung: Anteriorly percussion note impaired, with expiration prolonged and vocal resonance increased to second rib, with crepitation on coughing. At fourth rib, near axilla, breathing cavernous and scattered, crepitations thence to base. Posteriorly percussion note fair from apex to base, but numerous crepitations from angle of scapula downwards. Expectoration one ounce and a half in twenty-four hours, nummulated. Bacilli small and abundant. Patient was inoculated with 0·001 grm. of tuberculin at 10 A.M. on Dec. 27th. Temperature 101° at 9 P.M. From this date to March 31st had nineteen inoculations, increasing to 0·06 grm., equal to 0·343 grm. of tuberculin. The highest temperature, 104·2°, was observed on Jan. 17th, after an injection of 0·005 grm., but this was due to an extraneous cause, to be afterwards explained. No subsequent reaction exceeded 99·7° except the last, on March 31st, after an interval of twenty-two days, when it reached 100·6°. The expectoration was offensive after the first and almost each subsequent inoculation, becoming each time more catarrhal in character. Urine also occasionally showed haze of albumen. The pulse likewise became small, feeble, and intermittent. Crepitations likewise with friction appeared at various parts, especially the base of both lungs. Pains were complained of in epigastrium and in knees and ankles. This patient, although his symptoms never amounted to distress, yet seemed to demonstrate in a mildly characteristic manner nearly all the subjective and objective phenomena associated with reaction, and this with comparatively small doses, and yet not with acute, advanced, or extensive pulmonary lesions. By Jan. 12th there was no cough and hardly any sputum. On March 13th the patient weighed 8 st. 12 lb. 8 oz., or a gain of 11 lb. since commencing the treatment. On the morning of the 15th he complained of sickness and severe abdominal pain, chiefly localised in descending colon and cæcum. Although the bowels were reported to have been moved regularly, a large fæcal accumulation was found, which gave considerable trouble to reduce, and kept the temperature up for four days. After free evacuation the patient again improved, but the inoculations were suspended from March 9th to the 31st. For the last six weeks of the treatment the inoculations were only given at intervals of a week.

CASE 8.—George S ——, footman, aged eighteen, slightly built, nervous temperament. Height 5 ft. 5½ in.; weight 8 st. 13 lb. 8 oz. Admitted in November, 1890. General health good, and no illness previous to September, 1890, when he took cold. This was followed by severe pain in the left side and in the back. This lasted for a month, though he kept at work. There was cough, with a quantity of yellow expectoration. Night sweats were heavy during October, but decreased slightly during November. Has been losing weight. There is great dyspnœa, and complains of pain in left side still. Condition before inoculation: Pulse 112, regular, but short rapid stroke when full; cardiac pulsation noticeable in fourth and fifth interspace; first sound in mitral area reduplicated with short bruit in pulmonary area; the second sound also reduplicated. Urine: sp. gr. 1010, acid, no albumen. Expectoration scanty, muco-purulent; examination for bacilli was inconclusive, but numerous pneumococci were found. Respiration 22; spirometer 110 in. Flattening of left chest with diminished movement. Measurement in nipple line: right side, 17¼ in.; left side, 16⅞ in. Physical signs

in right lung: Anteriorly note impaired to first rib. In supra-clavicular region vocal resonance increased, but expiration inaudible. Posteriorly note impaired from above to below spine of scapula, and vocal resonance increased in supra-spinous fossa. Left lung: Anteriorly note impaired and movement of whole lung restricted. Dulness is absolute, with friction from fifth rib to base. Respiratory murmur feeble at apex and hardly audible at base. Vocal resonance increased to second rib, and diminished from fifth rib to base. Posteriorly note dull from apex to base, absolute below angle of scapula. Respiration generally feeble, especially at base. A line of ægophonic resonance is detected at point where absolute dulness begins, and friction sounds are audible. Patient was inoculated with 0·001 grm. of tuberculin at 10 A.M. on Dec. 27th, 1890. At 9 P.M., highest temperature of reaction 102·6°; patient from this date to March 31st, 1891, had twenty-one inoculations, increasing gradually from 0·001 to 0·1 grm., equal to 0·5635 grm. of tuberculin. The highest reaction, temperature 103·2°, was registered on the third inoculation of 0·002 grm. on Jan. 2nd. Condition on leaving: Height 5ft. 5⅝in., being a growth of ⅜in. The weight is 9st. 11lb. 8oz., a gain of 2 lb. since the treatment began, but a recovery of 8 lb. 4oz. on the lowest weight recorded on Jan. 11th, up to which date the loss of weight had gone on steadily. The skin, which was covered with acne, is now almost clear, and the whole appearance decidedly more healthy. Appetite good, tongue clean, and bowels regular. Pulse between 70 and 80; much less irritable. The cardiac sounds healthier and strong, only a short slight roughness is heard with the first pulmonary, and the second sound is slightly accentuated. Very slight cough, and expectoration to the extent of one drachm on an average daily. Still suffers from dyspnœa on exertion, and occasional pain in left base. Right lung: Movement excellent. There is a full resonant note on percussion, and there is normal vocal resonance over the whole lung. At the extreme apex the expiratory murmur is quite audible, but it is slightly prolonged. Left lung: Movement is freer than before the treatment, but is still deficient from apex to nipple, and in that region vocal fremitus is slightly increased. The note over the front of the lung to the sixth rib is resonant, but higher pitch than on right side. Behind, the dulness begins an inch below the angle of the scapula, and is absolute.

(To be concluded.)

THE TREATMENT OF CHRONIC DISEASES OF THE HEART BY MEANS OF BATHS AND GYMNASTICS.[1]

BY THEODOR SCHOTT, M.D., BAD NAUHEIM.

A REVIEW of the history of the treatment of chronic diseases of the heart reveals the fact that until comparatively recent times but little progress had been made, and it appears to have been generally agreed that, even when recognised in its earlier stages, "heart disease" must be regarded as a more or less hopeless ailment. The patient was practically condemned to exercise the virtues of self-restraint and resignation until such time as want of compensation came to seal his fate. In digitalis the physician possessed an admirable therapeutic agent, but its good results were rarely of a lasting nature, and, in most instances, the remedy sooner or later ceased to be effectual, even when its nauseating or other toxic effects were escaped. Yet, in spite of its drawbacks, and having due regard to the virtues of strophanthus, caffeine, sparteine, and calomel in cases of hydrops, it must be admitted that among drugs digitalis still holds the first place in the treatment of cardiac disease. But a new era opened when in 1872 the late Professor Beneke showed that by the use of the Nauheim baths relapses of acute articular rheumatism could be long averted or altogether escaped, and that it is possible to have recourse to balneological treatment in cases of cardiac disease, not only without danger, but with curative effect, ensuring even such effectual removal of recent endocardial exudation as to secure immunity from permanent organic valvular damage. By more extended observations and experience, and pursuing the lines laid down by Beneke, my late brother, August Schott, and I have endeavoured to formulate a system of treatment of chronic cardiac diseases of which I now propose to give an outline. It was not long before our observations showed that a surprising measure of alleviation, and even complete cure, of affections of the heart could be secured by the combined influences of a medically directed course of baths and an equally scientifically regulated course of gymnastic exercises, followed by graduated mountain pedestrianism, as suggested by that distinguished physician, Stokes. Later, we were able to publish evidence that the benefit to be derived from each of these measures accrues from one common cause—namely, the periodical and regulated stimulation of the heart to increased action, the muscles of that organ obeying the natural law of the relation between exercise on the one hand, and nutrition and growth on the other, as surely as do other muscles in which such changes as necessarily follow are apparent to the eye. A rapidly ensuing contraction of the dilated heart and distinct gain in the force of the pulse, as well as relief of dyspnœa and the other consequences of impaired circulation, were clearly observed to follow recourse both to baths and to gymnastic exercises; and it became no less apparent that, in the various forms of cardiac incapacity, the relative or actual inefficiency of the heart muscles is the morbid condition, to correct which attention should be mainly directed, and that the therapeutic agents alluded to had established their claim to hold the foremost place. Our experience further showed that it would be difficult to insist too strongly on the important influence which early recognition and treatment of the cardiac condition exercises on the certainty, rapidity, and permanence of the curative process.

I will now proceed to describe somewhat in detail the methods which we were led to adopt as the result of observations based on some 4700 cases, and extending over a course of nearly twenty years.

Balneological treatment.—Under this head I would desire at the outset to state that, if the physician have mastered the principles of treatment by baths and acquired the knowledge necessary for adapting their application to the actual condition of the patient from time to time, results almost as favourable as those obtained from the use of natural springs may be secured by recourse to artificially prepared waters. But it must be borne in mind that balneological treatment is an agent of great power as regards its influence on the heart; and that, unless it be applied with due caution and under uninterrupted medical supervision, combined with frequent observation of that organ, results the reverse of favourable may ensue. The treatment of cardiac incapacity should commence with baths containing chloride of sodium in the proportion of 1·5 per cent., with the addition of chloride of calcium to the extent of from 1 to 1·5 per 1000, and, in the early stages of the treatment, the duration of a bath should never exceed ten minutes. As regards temperature, one varying from 91° to 93° F. is suitable to conditions of anæmia and rheumatism, but for cardiac cases the proper temperature is 95° F. However useful higher temperatures may be in diverting the blood to the surface in cases of renal congestion, deficient secretion of urine, and engorgement of the more deeply seated vessels generally, their influence on the heart is to diminish its power, and therefore calculated to defeat the end in view—namely, the development of the heart muscles under the influence of more powerful action. On the other hand, if a sense of cold endure more than half a minute after immersion and the maintenance of a perfectly quiet attitude, or if it recur, it must be concluded that the temperature of the bath should in some degree be immediately raised. The mineral strength of the baths should be increased in proportion as they agree with the patient, up to from 2 to 3 per cent. of chloride of sodium, and from 0·5 to 1 per cent. of chloride of calcium, and, lastly, by the addition of carbonic acid. At Nauheim the proportional increase of the calcium salt is obtained by adding to the water of spring No. 7 the stronger water of No. 12, and, finally, by dissolving in the blended waters the still necessary quantity of the mineral in question. Our waters contain carbonic acid in proportions varying over the widest range, and the effervescing current bath presents as much as 1340 cubic centimetres to the

[1] Being an abstract of lectures delivered before the Balneological Society of Berlin.

litre of water in addition to mineral ingredients, and a natural temperature which brings it to the level of the strongest iron baths of Schwalbach, Pyrmont, and Spa. The desired effervescence of carbonic acid could be artificially produced by a very simple process, which we have described elsewhere. The duration of the bath must be increased simultaneously with its concentration, without, however, ever exceeding twenty minutes, especially in serious cases. As the course proceeds, the temperature of the water is to be reduced by cautious steps, with due observance of the objective symptoms already specified, and attentive observation of the heart, pulse, respiratory organs, and of the general health. Further, it must be laid down that intervals of repose should interrupt every course. At first the bath should be omitted every second or third day, until in fact it become apparent that the system has accommodated itself to the treatment and is ready to bear stronger and more frequently administered baths. By such means the patient may be brought to bear with advantage one of the most powerful balneological agents in existence—the Nauheim effervescent "current" bath, in which the patient lies in a stream forcibly propelled by the gas which it naturally contains. Unfortunately not a few are found to be unwilling or unable to devote sufficient time to admit of their being brought to a condition to bear with advantage this potent therapeutic agent. In some instances a graduated course extending over several months is needed for this purpose—in some, indeed, a succession of summer seasons.

Treatment by gymnastic exercises.—A suitably adapted system of gymnastic exercises of itself presents a sufficient means of treating chronic disease of the heart. It must provide a certain measure of resistance to be overcome by the muscles which are brought into action, and it must be of two kinds: that offered by a second person properly trained for the purpose, and that which is brought into play by the spontaneous action of antagonising muscles. The object in view is successively to bring into activity different groups of muscles, such as those of the arms, the trunk, and the lower extremities. If the patient retain sufficient endurance, the exercises may be repeated in the order indicated, or in any other which may be suggested by special circumstances. Consideration of the special action of individual muscles and of the joints with which they are connected will suffice to direct the physician in the management of the course. With a little training an attendant of even moderate mental capacity will soon learn to modify the resistance which he should oppose in such a manner as to avoid inducing any, or more than passing, acceleration of the patient's pulse. For that purpose it is desirable that the exercise of individual limbs should be interrupted by short intervals, during which the limb should lie in a state of repose, supported by the attendant's hands. Attentive observation of the state of the respiration, as indicated by the mouth, alæ nasi, and chest movements, will afford useful and necessary guiding indications. Each movement must be performed evenly and steadily, and without jerking, lest dyspnœa be induced, and the patient should be instructed to exercise a certain discrimination to which the attendant must be obedient. The latter must bear upon, but never grasp or constrict, the patient's limbs, lest the movement of groups of muscles be impeded or arbitrarily promoted. These precautions duly attended to, the resistance, always slight at the beginning, may be gradually increased, and, in the case of self-imposed exercises, the patient can attain the same end by calling into play antagonising muscles. The gymnastic course concluded, there must follow a graduated system of hill climbing, as recommended by Stokes. It must, however, be carefully borne in mind that the gymnastic is a necessary preliminary to the climbing course, in order that the muscles of the heart may be prepared to endure without harm the greater exertion involved in the latter. I have elsewhere drawn attention to the fact that climbing exercise practised at too early a stage of improvement must involve serious risk, and may even become a cause of death, especially if practised under the rules laid down by Oertel, which involve a considerable reduction in the supply of liquids. On the other hand, experience proves that valvular disease offers no barrier to the performance of even such difficult ascents as those of Mont Blanc and Monte Rosa when they form the crowning effort of a slowly and carefully graduated course.

(To be concluded.)

ON THE TREATMENT OF INTUSSUSCEPTION BY INJECTION OR INFLATION; AND ITS DANGERS.

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IN the cases of intussusception which commonly occur in infants and young children, treatment by injection or inflation has certain obvious advantages, to which only brief allusion need be made. Relief may thus be afforded to a condition, almost invariably fatal if left alone, by an operation which is not likely to arouse much parental opposition, and can be easily performed under almost any circumstances. Many successful cases have been recorded—e.g., in the Hospital for Sick Children, under the care of Drs. Cheadle and Barlow,[1]—and from time to time accounts of others appear in medical journals. The treatment, in fact, seems to be so generally adopted that I have thought it desirable to bring forward further evidence of those dangers which have already led to its condemnation by several authorities, and which should at least induce the utmost caution in its performance.

It may be remarked that some of the accounts of "successful cases" are, from want of detail or otherwise, of no value at all, and that in others the diagnosis is fairly open to question. I need hardly point out, besides, that there are few inducements to publish an "unsuccessful case" which has been dealt with in a way generally considered orthodox. It may also be difficult to tell without post-mortem examination whether the invagination was reduced or not, and, still more, whether any damage was caused which contributed to the fatal result.

Before beginning the operation it is evident that one should know as far as possible (1) the best way to do it; (2) what force may be used without danger. I must own to some surprise at the vagueness of the directions given in most text-books, and even in special treatises, in regard to both these points, especially the latter. I have even seen it frankly stated that "no rule can be given, but the force must be considerable." As I hope to show, the force which ought to be used is much less than is generally supposed to be safe. It should be even, not intermittent, there being in the latter case increased danger of exciting peristalsis and of rupture, and should be capable of exact estimation at any moment. Most authorities agree that any method (such as the use of the bellows of Higginson's syringe, of syphons of aerated water, &c.) not fulfilling these conditions, is very dangerous, and ought to be altogether abandoned. The plans which have been suggested of plugging the rectum to cause accumulation of intestinal gas, and that of generating carbonic acid gas within the bowel, are open to the same objections, apart from other considerations.

It has been urged that air or gas has the advantage of being compressible and is not so likely to cause diarrhœa as fluid, or to rupture the intestine by its weight acting laterally.[2] Considering how the bowel is supported within the abdomen, and that water enough to fill the colon of an infant only weighs about 1 to 2 lb., it seems evident that a bowel which cannot bear injection of water is equally unfit for insufflation at a similar pressure. The elasticity of a gas certainly would to some extent neutralise the evils of irregular pumping, but otherwise this property is not obviously of much value. Insufflation cannot, moreover, be carried out at a regulated pressure without a special apparatus, not likely to be always available when wanted. Water, on the other hand, can be allowed to flow in from an ordinary funnel or irrigator with tubing, the height to which the vessel is raised indicating the exact force of the stream. The rate at which the water is passing and the amount injected may also be observed. Leaking may be avoided by Lund's instrument,[3] which is readily improvised by coiling a piece of distended rubber-tubing on a bung through which the rectal tube is passed; or lint, or a bandage, may be rolled round the tube to form a slightly conical shoulder. Pressing the nates together is unreliable.

[1] THE LANCET, Jan. 26th, 1889.
[2] Lucas, THE LANCET, Jan. 10th, 1886, and others.
[3] Treves: Intestinal Obstruction, 1884.

It has been shown that there is no advantage in inversion.[4] Massage and manipulation will be referred to later.

The effect of an injection as regards distension of the lower bowel depends on the obstruction and on the external support. The greater the general intra-abdominal tension, the more is the *distending* effect neutralised, the intestinal wall being then *compressed* between opposing forces. In a case of irreducible intussusception, if the abdominal walls are lax (as in most infants, especially under chloroform), and there is not much tympanites above the obstruction, the large intestine is distended by almost the whole force of the stream. Kinking may in the same way cause distension, and may even prevent the injection from acting on the intussusception at all. The pressure may also be suddenly varied by peristaltic contraction. During the last year I have tried to find, as far as can be done in the post-mortem room, the amount of distension an apparently normal colon will bear without rupture. The experiments were made chiefly in cases of children under two years of age. Except where stated, a ligature was tied round the ileum near the valve, and the abdominal opening closed before turning on the stream. After a given time, generally ten minutes, the water was let out per anum before opening the abdomen. The results were as follows:—

Height of irrigator.	No. of cases.	Age.	Hours since death.	Results of experiments.
Feet.		Yrs. Mths.		
11	1	0 3	60	Rupture of peritoneum (1½ in.) and smaller complete rupture.
8	4	1 9*	33*	Cracks in peritoneum, chiefly longitudinal, in three cases multiple and extensive.
	1	5 0	35	Nil. Peritoneum ruptured after raising to 11 ft.
	1	0 1	32	Nil, even with abdomen open.
	1	7 0	30	Transverse colon only, nil. Raised to 11 ft., nil.
	1	4 2	46	Ditto. Rupture of muscular bands.
6	1	8 6	52†	Transverse colon and flexures only, removed with mesentery. Almost immediate rupture of longitudinal muscular band and of peritoneum, the latter peeling off in two places for some inches. After five minutes complete rupture. Several cracks in mucous membrane seen on opening.
5	2	0 9*	30*	Cracks in peritoneum.
	4	2 4*	35*	Nil. In two cases irrigator raised to 8 ft., with resulting rupture of peritoneum.
	1	2 5	25	Abdomen open. Rupture of peritoneum.
4	2	0 6*	25*	Abdomen open. Nil. On raising to 6 ft., complete rupture in four and five minutes.
	1	1 8	38	Abdomen open. Ligature at splenic flexure. Raised to 6 ft. and 8 ft., nil; at 11 ft., large crack in peritoneum.
		1 11	24	Ditto. 6 ft., nil; 8 ft., peritoneum ruptured.
2	1	0 3	38	Abdomen open. Nil.

* Average. † Cold weather.

It seems therefore that when the resultant pressure distending the colon is about 2½ lb. to the square inch (irrigator raised 5 ft.), there is apt to be cracking of peritoneum, which usually occurs on raising to 8 ft.; and that under a pressure corresponding to an elevation of only 6 ft. there may in some cases be complete rupture of the bowel. After some of my own experiments had been made, I found it had been stated by Dr. W. E. Forest of New York[5] that in adults a pressure of 15 lb. to the square inch may be employed; in infants "6 lb. to the square inch is a safe force to use in any acute case during the first three days," and that this may be increased to 10 lb., the funnel being raised from 12 to 20 ft. by laying the child "in the hallway and mounting the stairs." On referring to his original paper,[6] I found an account of ten experiments, many of which do not apply to a case of irreducible intussusception, whilst of others various important details are not given. The recommendation to go to 6 lb seems based on two experiments only, and that to exceed this on only one; in the latter, rupture occurred before a pressure of 10 lb. was reached. The whole tone of Dr. Forest's papers also suggests that he hardly realises that we have to deal, not with an intestine of normal toughness and elasticity, but one which is, almost from the onset, altered by congestion, and may even have become gangrenous within the first twenty-four hours. I have had only one opportunity of experimenting post mortem with an invagination which occurred during life, but here the results were instructive.

An infant aged three months was admitted 3 P.M. It had been sick since the morning, and passed blood. There were the usual signs of an intussusception, which was felt per anum. Inflation was performed with a Higginson's syringe, the tumour "gradually disappearing." Opium was given, and there was no return of the symptoms for some hours. Vomiting recurred at midnight, then increasing abdominal distension and collapse, death occurring in the afternoon. Post-mortem examination (twenty-four hours later): No general peritonitis. Stomach and small intestines much distended, hiding the intussusception, the apex of which was below the splenic flexure. Some injection of sheath, gradually increasing to reflection, where there was a little soft lymph. A tube was tied in the rectum and connected with an irrigator raised two feet. The intussusception in a few minutes was reduced, except about an inch, the end of the ileum, the cæcum, and part of the vermiform appendix remaining tightly ensheathed by the colon. Intestine last unrolled deep red, but without signs of decomposition. After fifteen minutes the irrigator was raised to three feet. A slight further reduction took place; but this speedily stopped, and in four minutes the colon ruptured in three places just below the intussusception. Although firmly gripped, complete reduction was in a few minutes effected without obvious damage by manipulating from below. There was a little lymph on the peritoneal surface of the cæcum, and the mucous membrane was infiltrated and slightly shreddy. The valve was much swollen, and by its obstruction would probably have caused rupture at the moment of complete reduction, had this been effected by the injection.

Senn[7] found in experiments on two cats with intussusceptions of three days' duration that in one case insufflation succeeded; but in the other the force required to effect reduction ruptured the peritoneum in three places. Death occurred next day, with symptoms of diffuse peritonitis. He remarks that probably when the peritoneum is ruptured "the gravest consequences may follow; there is danger of giving way of the softened coats, of infective and septic peritonitis, and of subsequent adhesions," &c. In a post-mortem experiment he ruptured an inflamed bowel (in an adult) at a pressure of two pounds and a half. The possibility of a weak spot from some antecedent or independent disease must not be forgotten.

The following case also shows the risks of the practice.

An infant aged eight months, symptoms four days. Under chloroform a tumour was found in the left side of the abdomen. Some collapse occurred during examination, and stimulants were administered. On revival two injections, each about ten ounces, were given with Higginson's syringe. The first was only retained a short time, and allowed to escape before the second was given. The tumour could no longer be felt, but there was still a sense of resistance in the epigastrium and of emptiness in the right iliac fossa. The infant was kept under the influence of opium, and for over two days there was only some expression of pain, with increasing distension of the abdomen. Vomiting then began again, and the tumour was found on examination under chloroform. About ten ounces of water were injected from an irrigator held up about three feet, and allowed to escape after a few minutes. This was done three times; the tumour could not then be distinctly felt. An injection of about a pint of water was made in the same way at a lower pressure next day, and again on the day following. Death occurred a few hours later. All the time the motions had been natural, except for occasional looseness. Temperature very irregular (98·4° to 104·6°). Post mortem three ruptures were found in the descending colon. The lowest was transverse, and extended through peritoneum and muscle. The next was similar, with its edges rounded off, and looked as if it had been caused some days before death. The highest was

[4] Treves, op. cit.

[5] New York Med. Record, Oct. 5th, 1889; quoted in Brit. Med. Jour., Dec. 28th, 1889 (Retrospect of Medicine).

[6] Amer. Jour. Obstet., July, 1886.

[7] Intestinal Surgery, Chicago, 1889.

a small one, completely through all coats, and situated a few inches below the apex of an unreduced intussusception. There was commencing general peritonitis.[8]

Mr. Bryant in referring to similar cases states his opinion that "under all circumstances the treatment by inflation is hazardous and dangerous, although success in exceptional cases may be recorded[9]"; and that it is only justifiable within the first three days and in cases not presenting symptoms of acute strangulation. In another instance the bowel was gangrenous when reduction by injection was attempted[10] (on the fifth day). A serious objection to the operation, however performed, is that the conditions under which it is done can only be roughly guessed at. An invagination of fairly healthy intestine may at one time remain unreduced when a little more pressure would have completely unfolded it; whilst at another time a very slight force may be enough to cause rupture. The surgeon is always warned that in using taxis for relief of hernia he should take the greatest care lest a congested bowel be burst or a gangrenous coil returned[11]; yet it has been advised that as the intussuscepted part unrolls, it is to be distended "with considerable force"!

It may here be remarked that manipulation through the abdominal wall is not only difficult, but during injection also dangerous, as pressure on a softened part may be thereby suddenly increased. So far as I know there is nothing to at once indicate the occurrence of partial rupture; and although a sudden escape of gas or fluid due to a large tear may be diagnosed by physical signs from that due to a successful reduction, it is probable that these signs would fail when the perforation is small, or when there is much tympanites above. Another objection is the difficulty of telling when reduction has been complete. Although it is often easy to feel the tumour in some regions, this is by no means the case when it is overlaid by distended stomach and intestines, or tucked away under the liver and costal cartilages. The capacity of the large intestine is so variable that it is no guide to the extent of reduction, especially as only the last inch or so usually remains invaginated.[12] After complete reduction a tumour formed by the thickened bowel may be felt through the abdominal wall almost as distinctly as before. This was noted in a case[13] in which successful reduction had been effected after abdominal section. There is also afterwards a deceptive lull, lasting some hours, due to the effects of shock, anæsthetic, and cessation of feeding, as well as the opium usually given. Such delay may so alter the general and local conditions as to render hopeless any further proceedings.

The operation of opening the abdomen and dealing with the intussusception according to the state in which it is found is one which I should not venture to discuss but for the fact that even those who argue in its favour advise (with few exceptions) that it should only be performed after injection has been tried and has failed. It becomes therefore necessary to inquire whether an unsuccessful injection affects the prognosis as regards subsequent abdominal section, and whether (as as seems to be assumed) the one proceeding is on the whole less likely to do harm than the other. I suppose few surgeons would give an undecided reply to the first question, even when no gross damage has been done; and still fewer would agree with Dr. Forest that it is justifiable to deliberately risk a rupture rather than open the abdomen; or with Professor Senn, that such rupture "does not add to the danger of laparotomy, whilst rendering it imperative." The last statement is the more remarkable, as he writes elsewhere (in his article on Volvulus): "Why this method of reduction should not be tried after the twisted loop has become softened and greatly distended by intestinal contents requires no explanation"; and (in regard to constrictions) "no attempt should be made to liberate the bowel until measures have been taken to guard against fæcal extravasation in case the gut should be ruptured."[14] As already remarked, injection has an advantage in being less dependent for success on personal skill, with suitable appliances and surroundings. But is it not equally true that an experienced practitioner may blindly do as much mischief as the merest tyro? If the bowel is in a condition to be reduced at all, it may be compressed and pushed out as evenly and safely by the fingers as by an injection; whilst the distension of the sheath which occurs during the latter proceeding, so far from being an advantage, is, except perhaps within the first few hours, a great source of danger. I need not dwell on the obvious value of being able to feel and see what one has to deal with, both as regards the intussusception and the various complications which may exist. The distension is also apt to cause or increase collapse, and may greatly interfere with the breathing and the heart's action, these being already disturbed by the anæsthetic. Death has thus occurred in at least one recorded case.[15] Even the administration of an ordinary enema for constipation has been followed by fatal collapse.[16] It can hardly be alleged that, with proper precautions, abdominal section is in this respect the more dangerous; or that by its performance there is appreciably increased risk of either simple or septic peritonitis, such being frequently the direct consequence of the invagination. Most of the arguments which have been brought forward in favour of early injection apply equally to early abdominal section; and it has been shown both by experiment and otherwise that the latter may succeed when the former fails. When an acute case has been allowed to go on for some time, it is generally agreed that injection should not be attempted. Even then, considering how extremely rare is spontaneous cure in children by sloughing or otherwise, it is a question whether abdominal section may not in many cases be justifiable. In certain urgent conditions the probable result of action has not to be considered so much as the inevitable result of doing nothing. There is seldom hesitation in performing an operation, perhaps a serious one, in the most unfavourable case, say, of ruptured aneurysm or obstructed labour; or in ascribing a fatal ending less to the operation than to the condition which necessitated it. I venture to submit that it is in this class that operations in late stages of acute intussusceptions ought properly to be included.

Kensington, W.

8 H. S. C. Museum, 343.
9 Harveian Lectures, 1884. For other cases see THE LANCET, June 4th, 1887; British Medical Journal, June 2nd, 1888.
10 H. S. C. Museum, 341.
11 See Holmes' System of Surgery, 1883. vol. ii., pp. 776-7.
12 See also Lawford Knaggs in THE LANCET of June 11th, 1887.
13 THE LANCET, Nov. 29th, 1890.
14 Senn, op. cit., pp. 89, 103, 114
15 Bryant, op. cit. 16 Westminster Hosp. Reps., vol. v.

A CASE OF PEMPHIGUS VEGETANS (NEUMANN).[1]

BY T. PAGAN LOWE, M.R.C.S.,
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IN vol. lxxii. of the Medical and Chirurgical Transactions Dr. Radcliffe Crocker[2] reports a case of this disease, together with fourteen other similar cases from different quarters. These fourteen cases were all that he was able to find, and only three of them were procured from home sources, the others having been reported on the Continent. Those three were seen by Mr. Jonathan Hutchinson, and were described by him as a new disease characterised by "chronic inflammation of the lips and mouth." They were seen before the disease had made much progress, and they all recovered under treatment by the internal administration of opium. With these three exceptions the remaining cases—including Dr. Crocker's and my own—died. In both these cases the opium treatment was given a fair trial, but they did not come under observation until the disease was far advanced. My patient was a married woman, aged forty-seven, who had always enjoyed excellent health until she was attacked in November, 1889. The throat and mouth were first affected, the disease appearing soon afterwards in the eyelids, axillæ, groins, as well as in other situations. There was nothing of any importance in the family history, and neither she nor her husband had suffered from syphilis. When her case came under my notice in February, 1890, the disease was of three months' standing, and her condition was briefly as follows: Both lips were swollen, everted, and covered with black crusts, which, when detached, exposed a raw bleeding surface beneath. The mucous membrane of the mouth and pharynx

1 A paper read before the Bristol Medico-Chirurgical Society on March 11th, 1891.
2 I am much indebted to Dr. Crocker for having kindly supplied me with a copy of his paper which was read before the Royal Medical and Chirurgical Society of London on March 12th, 1889.

was dry and brown, and covered with numerous excoriations. The eyelids were dotted with small black crusts, especially towards the outer canthi, and there was slight suffusion of the conjunctivæ. The scalp was thickly studded with crusts. Both axillæ, with the adjacent portions of the chest and back, presented an appearance as if the skin had been severely scalded and the epidermis of the blisters had been peeled off; moreover, the same condition was present over the lower portion of the abdomen, extending downwards to the groins and upper portion of the thighs, and over the entire gluteal regions on both sides. The groins presented a very peculiar appearance, the epidermis being raised in thick, moist, irregular masses of leathery consistence, which were firmly adherent to the parts beneath. On the right flank, continuous with the denuded surface already described, was a large inflammatory area extending outwards for several inches, presenting the appearance of cutaneous erysipelas (this subsequently broke down, leaving a raw surface continuous with that already described). Between the toes the skin was thick and leathery, closely resembling that in the groins. Between the fingers the integument was denuded of its epithelium. On the contiguous inner surfaces of both knees were two large raw patches, but only in one or two situations were any typical pemphigoid spots discovered; of these, one was on the middle of the extensor surface of the right forearm, another on the left side of the chest, and a third on the outer side of the left leg about the midde third. The patient's general condition was deplorable. She was unable to turn in bed without suffering severely. Deglutition was difficult and painful, and defecation and micturition produced severe torture. She had not slept for more than two hours altogether during the week preceding my first visit, and had taken very little nourishment; nevertheless, curiously enough, there was little or no emaciation. The treatment adopted was that recommended by Mr. Hutchinson—namely, opium, together with a liberal supply of stimulants and liquid nourishment. Local applications of eucalyptus ointment were freely applied, and constantly changed, but these did not appear to retard the spread of the disease. Dr. Unna's preparation of zinco-gelatine was also used in places. Dr. Goodridge very kindly saw this case with me, and added the weight of his opinion to mine that the disease had no connexion whatever with syphilis.[3] Together with many valuable suggestions as to the conduct of the case he proposed that arsenic should be given in addition to the opium, in view of the probable connexion of the disease with common pemphigus. The case terminated fatally on March 5th, 1890, about three months and a half from its commencement. A necropsy was not obtained.

Bath.

ON THE

ACTION OF METHYL VIOLET (PYOKTANIN), WITH ESPECIAL REFERENCE TO ITS USE IN GONORRHŒA AND IN THE TREATMENT OF ULCERS.

By FRÉDÉRIC F. BURGHARD, M.S.LOND., F.R.C.S.E.,
ASSISTANT SURGEON TO KING'S COLLEGE HOSPITAL.

PROFESSOR STILLING, in his article upon the Aniline Dyes as Antiseptics, an abstract of which appeared in THE LANCET of April 18th, remarks that he has never seen irritation follow the application of a 1 in 1000 solution of this drug, either in man or animals. It is in order to show that such a solution is not by any means devoid of irritating properties in a not inconsiderable number of cases that I bring forward some of the results that I have obtained during a six weeks' trial of the drug. The number of cases in which I have used it is forty-five up to the present time; of these, thirty were cases of gonorrhœa in various stages of the disease, thirteen were cases of ulcers, wounds, and boils, and the remaining two were cases of malignant disease too advanced for operation. Of the last two cases I desire to say nothing at present; they will be dealt with, I hope, in a subsequent communication. On the first occasion on which I used the drug it was ordered for seven patients with gonorrhœa, two having had the discharge for three weeks or longer, the others having noticed it for the first time a few days previously. It was prescribed as a 1 in 1000 watery solution, and the men were instructed to retain the fluid in the urethra for a few minutes before allowing it to escape. Three cases in the acute stage were treated in a similar manner on a second occasion. The results were as follows. In the two cases of three weeks' standing the discharge was markedly decreased; but there was much smarting on micturition—a symptom that had not been present previous to the use of the remedy, and which in one of the men amounted to severe pain. In the remaining eight cases the results were all the same. The discharge was increased in amount; there was intense scalding, with much induration and tenderness of the corpus spongiosum. In all the cases these symptoms had come on before the third injection was used. In one out of the eight cases there supervened much œdema of the prepuce, with acute retention of urine, and the dorsal vein of the penis became thrombosed. In the remaining cases treated by this drug the strength of the solution was diminished. At first a 1 in 2000 solution was used. But in several cases that was found to cause much scalding on micturition; it appeared, however, invariably to rapidly diminish the amount of discharge. It has recently been my practice to commence with a 1 in 3000 solution, and cautiously increase the strength of it. And my principal object in writing this has been to advise those who are about to make a trial of pyoktanin in gonorrhœa to begin with a weak solution such as I have indicated, rather than the strong ones recommended by Professor Stilling and others.

With regard to its use in ulcers, it seems to me to be at once very efficacious and peculiarly applicable in out-patient practice. Foul ulcers lose their fetor, and sloughing sores clean up rapidly under its application. If it is used as a powder, either pure (as I prefer to use it) or in combination with another drug, it may be dusted thickly over the ulcer, and thick wool dressings applied outside. Under these circumstances the dressing does not require changing for several days, and that additional aid to sepsis—i.e., dressings performed by the patient—is avoided. The powder should be dusted thickly on at each dressing, and each subsequent dressing should merely consist of dusting more powder over the crusted mass already there. This, in my hands, has given excellent results. I have also found it a valuable aid in cutting short suppuration when dusted into cavities made by opening abscesses. It is far superior to iodoform. In some cases it appears to have a decided local anæsthetic effect, which is very useful when dealing with painful ulcers. With regard to the irritation caused by its injection into the urethra, the explanation given by Professor Stilling can hardly hold good in my cases. The substance was proved by chemical analysis to be quite free from impurities, and when injected subcutaneously in quantities of 1 cc. at a time it caused no irritation, although such a strong solution as 1 in 300 was used. Moreover, the minute traces only that could ever be found in such dilute solutions as 1 in 1000 of such impurities as arsenic, copper, or zinc, would hardly give rise to that great amount of urethral irritation. Indeed, in some of the cases a zinc or copper injection was substituted for the pyoktanin with great advantage. When first injected beneath the skin, I have usually found that the drug causes some little pain, especially if the injection be made into a brawny cancerous spot, but this generally passes off in about half an hour. There is often a slight local induration at the seat of injection for a day or two, but this is not tender. I have, however, lately met with a case where very tender, rapidly growing swellings developed at the seat of puncture. The case was one of very advanced malignant disease of the uterus. The patient had been in the habit of taking large doses of morphia subcutaneously for the relief of extreme pain, but no swellings had developed about the injection punctures. Two pyoktanin injections were given, each containing only a few drops. At each of these two spots swellings developed, and have been steadily increasing up to the present time. They are very tender, but there is no fluctuation to be detected. I have noticed practically no constitutional disturbance even after the injection of large doses. Injections of from 80 to 100 mins. of a 1 in 300 solution may be given without raising the temperature more than a degree, and without any bad results otherwise. This is quite in accordance with the observations of Professors Stilling and Mosetig-Moorhof.

Since the above was written I have obtained a quanti y

[3] Before I saw this case the patient had been treated for syphilis without benefit.

of the drug prepared by Merck of Darmstadt, and recommended by Professor Stilling as being free from impurity. With it, however, I have had much the same experience as I have described above. Solutions as strong as 1 in 1500 almost invariably gave rise to great increase in the scalding on micturition, and some amount of retention of urine was not uncommon. I, therefore, never begin now with a solution stronger than 1 in 3000, and gradually increase it up to 1 in 1500. Used in this way, the drug appears to me to be a useful addition to our list of urethral injections, though by no means unfailing or devoid of irritation in its action.

Weymouth-street, W.

A CASE OF ECTOPIC GESTATION.

BY E. H. HOWLETT, F.R.C.S.

SEVERAL cases of successful operation for ectopic gestation have been published in the different medical journals of recent date. To these I beg to be allowed to add one which was under my care last year. On August 17th, 1890, Mr. Davy of Hull requested me to see a case that was under his care. The patient on the previous day had been seen in consultation with Dr. E. O. Daly, who suggested the probability of its being one of tubal pregnancy. The previous history of the case was as follows:—The patient had had four children, the youngest being seven. Four years ago, and again two years since, she suffered from "trouble with the womb," with a purulent discharge from the vagina. The present illness began four weeks ago, when, after lifting some heavy furniture, she felt something in her left side give way. This was followed by severe abdominal pain and bearing-down. As this pain continued, Mr. Davy was called in. He reports that at that time there was a fluctuating mass to be felt behind and to the left of the cervix uteri, displacing it to the right. As the temperature was 101°, he considered it as inflammatory, and treated her by rest. At the end of a fortnight she was allowed to go downstairs, and shortly afterwards was seized with a return of the previous symptoms. As the case did not progress favourably, Dr. E. O. Daly saw her in consultation, and suggested the probable nature of the case. On my first seeing the patient her condition was as follows: Very anæmic, countenance anxious, evidently in considerable pain; pulse rapid and feeble; a slight purulent vaginal discharge; temperature 101°. Thorough examination of the abdomen was impracticable, but a rigid condition of the abdominal muscles in the left iliac region, with dulness on percussion, could be detected; whilst per vaginam the uterus was found pushed over to the right side, with a hard mass in Douglas's pouch and fulness in the site of the left broad ligament. The patient stated her own impression that she was three months pregnant, and in support of this view the breasts contained a slight trace of milk; she also was conscious of a swelling in the left iliac region prior to her first attack. It was decided to give ether and make a more complete examination. This was done, the previous impressions being confirmed; and as the mass behind and to the left of the uterus seemed to contain fluid an aspirator was employed, half a pint of fluid blood being withdrawn. The diagnosis of ectopic gestation with secondary rupture into abdominal cavity having been made, it was arranged that if there were any return of the bleeding, as shown by syncope, the abdomen should be opened. The same evening, about 10 P.M., a summons arrived to proceed at once to the house to operate; therefore, assisted by Dr. Pigeon, I performed the usual operation. The left tube was found to be ruptured in its outer third, and the broad ligament of that side torn into shreds. The ovary was discovered detached, but affixed by adhesions behind the uterus, Douglas's pouch being occupied with two large masses, one probably the placenta, the other partially organised blood-clot. The abdominal cavity contained a large amount of fluid blood. In washing out, the fœtal head was discovered (which, from its size, showed that the pregnancy must have been between the third and fourth months), the rest of the body probably escaping, and being lost amongst the clots of blood scooped out with the hand, or washed out. The patient being now in a desperate condition, the abdomen was closed, with the exception of a drainage-tube, at the lower angle of the wound, she was placed in bed, and the usual restorative methods employed. Had her condition permitted, I would have removed the right tube and ovary, for there was evidence of considerable damage from old inflammation. Recovery was gradual but steady, the tube being removed on the fourth day. At the end of a week the temperature began to rise, and gave some cause for uneasiness till, on the fourteenth day, a small discharge of pus came from the site of the drainage-tube, which relieved her completely. Recovery from this date was rapid, the patient at the present time being in sound health. On looking back, one can only express regret that as soon as the aspirator revealed the nature of the contents of the tumour, the operation was not proceeded with, for I feel that the delay very nearly caused the death of the patient. This being the first case of ruptured tubal pregnancy that I have had under my own care must serve as a slight apology for my hesitancy. The rupture in the first instance was probably into the broad ligament, and, had rest been persevered in, might have resulted in a cure. The second attack of pain (after coming downstairs) points to the date of the rupture into the abdominal cavity. The wonder is that the patient did not then bleed to death. Should it ever be my lot to operate on a case of a similar nature, I would certainly remove the second tube, for I hold that this patient stands a fair chance of repeating the offence, an opinion in which most other operators would concur.

Hull.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF BLOODLETTING IN A PATIENT OF SEVENTY-TWO FOR CEREBRAL CONGESTION.

BY JOHN GAY, M.R.C.S. ENG., L.R.C.P. LOND.

DR. OGLE'S article on the use of Bloodletting in suitable cases emboldens me to put forward the following case, which is, I think, of some interest, also, apart from the treatment:—

I was called a short time since to see a lady of seventy-two years of age who had suddenly fallen down in a "fit" a quarter of an hour previously. I found her lying on a bed, the face flushed, almost purple, the left side of the face, left arm and leg twitching strongly, suggestive of intra-ventricular hæmorrhage; but the pupils were equal, and she was not unconscious, but complained of severe headache. Her articulation was difficult, the tongue partaking of the clonic spasms, and rapidly becoming more so. She could not swallow, any attempt causing cough. The pulse was full and irregular. She had passed urine unconsciously. The twitching was rapidly increasing, the articulation becoming more difficult, it being, within a few minutes of my arrival, almost impossible to distinguish any word she tried to say, and she appeared to be gradually lapsing into a comatose condition. I was told that she had suffered from chronic bronchitis, had a "weak" heart, and six months ago had a distinct apoplectic attack, which left her for a time paralysed in the left arm and leg. This had passed off. Feeling that the usual remedies, which were at once applied, were quite inadequate, I decided, with the ready consent of her relatives, to cautiously bleed from the arm. This I did, watching the pulse and general effect, to an ounce and a half or two ounces. Within an hour there was decided lessening of the convulsions, and within four hours she was able to sit up, the headache having almost gone. She made an excellent recovery, with no paralysis. I have ventured to bring forward this case as an eminently "suitable" one for a treatment which is very infrequent, believing that but for it cranial hæmorrhage would have occurred—the congestion being clearly acute and considerable, and hæmorrhage having occurred previously.

Putney, S.W.

A RARE CASE OF HEPATIC ABSCESS.

BY DR. JOSEPH GABRIEL, C.M.S.,
MEDICAL MISSION, CAIRO, EGYPT.

ON Aug. 29th, 1890, I was called to see Sheik Khalee, aged thirty-two, a native of Hayoum, in Upper Egypt. He was suffering from pain in the right side; his face was pale; tongue coated white; pulse 100; temperature 102°, with irregular fits of chill; respiration short and rapid. According to the patient's statement his illness was of one month's duration, during which he was getting worse every day. On inquiry regarding his habits and his previous illnesses, he said that he had been in the habit of drinking intoxicating liquors, which he stopped five years ago; a year before this date he suffered from intermittent fever, and he did not have dysentery. Physical examination showed that on percussion the pain was increased, and the area of liver dulness was larger than usual, but I could not detect any fluctuation; urine of natural colour. I had no doubt that my patient was suffering from inflammation of the liver, and probably commencing abscess. I gave him a solution of diluted nitro-muriatic acid, sulphate of quinine, and tincture of rhubarb, and applied a blister on his right side. On Sept. 3rd I again visited the patient, and found him very little better. He complained of pain in the right shoulder; his bowels were irregular. I told him to continue the medicine, and prescribed in addition alkaline mineral waters. On the 10th his temperature was almost normal; pain considerably less, but he looked very weak still, and had no appetite. I told him to continue taking the mineral waters, and applied a second blister on his side. On the 20th I visited him again, and found him walking in the garden. Upon examination I found everything normal; he was apparently cured, and enjoyed good health during two months, at the end of which he was suddenly attacked by dyspnœa and a severe cough, and expectorated a material like chocolate in colour. I examined the expectoration, and found it composed of pus cells and broken-down liver tissue. I ordered him a stimulant, tonic medicine, nourishing food, and left the case to nature. He still expectorates, and up to the present time has expectorated about 400 ounces, but has strength sufficient to go about and fulfil his ordinary duties.

Cairo.

THE VALUE OF THE TONGUE AS A RESPIRATOR.

BY J. M. ELBOROUGH SCATLIFF, M.D., M.R.C.S.,
CION. SURGEON BRIGHTON, HOVE, AND SUSSEX THROAT AND EAR HOSPITAL.

IT is not generally known that nature has provided each of us with the best respirator always at hand in the tongue. For years I have personally relied on this alone, and have recommended this proceeding to many patients. When facing a cold east wind, or breathing quickly the night air, I never quite close my mouth, but purposely keep the lips a trifle parted, and at the same time curl up my tongue towards the roof of my mouth until the tip reaches as far back as the soft palate, and I gently press the arched under surface of the tongue in some degree against the hard palate (a little practice soon makes this easy to do). The cold air then, as it enters the mouth, strikes against the under surface of the tongue, as well as the floor and sides of the mouth, and is made to pass in a somewhat circuitous manner between the sides of the tongue and the buccal mucous membrane to the pharynx, being thereby warmed in its course, so that by the time it reaches the larynx it is nicely rid of chill, and does not excite cough and catarrh. At the same time a certain quantity of air, of course, finds its way through the nasal passages to the chest, and it is obvious that a larger quantity of cold air can be effectually warmed by this method of procedure than by relying on either the nose or mouth alone. That the large blood-supply of the tongue renders this organ an excellent air warmer must be obvious to all.

Brighton.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. GEORGE'S HOSPITAL.

CASES OF CHOLECYSTOTOMY; REMARKS.

(Under the care of Mr. WILLIAM H. BENNETT.)

THERE are many points of interest in the following cases independently of the development of malignant disease in the first two from which the patients died. This is, however, of considerable importance as regards the relationship of the gall-stones to its causation. Dr. Hilton Fagge[1] wrote: "But the way in which death is most frequently brought about in persons who have gall stones is by the development of cancer of the gall-bladder or the bile-ducts." He mentions twelve cases out of twenty-one of patients suffering from gall-stones who died from cancer, and concludes: "However, if some deeper relation than has yet been found should be proved to exist between the formation of biliary calculi and the development of cancer in the body generally, this would not do away with the clinical significance of the facts stated; it would still remain true that when a patient who has had attacks of biliary colic dies of protracted jaundice the ducts are invariably found to be affected with cancer." This opinion is in favour of earlier operation.

CASE 1. *Painful distension of the gall-bladder; cholecystotomy; removal of impacted stone; complete temporary relief; subsequent death from malignant disease.* (From notes by Mr. C. Cotes, surgical registrar.)—S. W——, a married woman aged forty-nine years, was admitted on Aug. 5th, 1890. She had always been healthy till about three years before, when an attack of jaundice occurred and laid her up for several weeks. A year prior to admission she had suffered from acute pain in the left side of the abdomen. This pain suddenly disappeared, leaving great general weakness. Since that time she had suffered much from constipation, the motions being frequently "almost white." For six months there had been loss of flesh and continual discomfort below the region of the liver. Three weeks before admission she noticed a round lump to the right of the umbilicus. On admission the patient was a spare but not unhealthy-looking woman, complaining of pain in the right hypochondriac region. Urine acid, sp. gr. 1020, trace of albumen; motions clay-coloured and infrequent. On palpation there could be easily felt just below the line of liver dulness, which was not abnormal, a rounded swelling, movable, elastic, rather tender to the touch, and presenting all the characteristics of a distended gall-bladder. On Aug. 14th, medical measures having failed to give relief, Mr. Bennett exposed the tumour by a vertical incision over its most prominent part, stitching the parietal peritoneum to the skin at the edges of the incision. The tumour, which presented freely at the wound, and was obviously the gall-bladder, was emptied by means of a cannula, the parts around having been carefully protected with carbolised sponges. The first part of the contents consisted of a quantity of putty-like material, which was followed by about six ounces of altered bile. The gall-bladder was then freely laid open, drawn well up into the wound, and two gall-stones removed, the second of these being firmly impacted in the duct. After the removal of the impacted stone another hard roundish mass of small size could be felt further on, but after careful examination it was determined not to interfere with this, partly on account of its inaccessible position and partly because the fibrous consistence which it presented to the touch was rather suggestive of its possibly being a malignant nodule. The edges of the wound in the gall-bladder were sutured to the margin of the abdominal incision, a glass drain introduced, and the antiseptic dressings

[1] System of Medicine, vol. ii., p. 504.

applied as usual. The operation was tedious, the patient being consequently rather collapsed at its termination; she, however, rallied rapidly. During the first forty-eight hours the discharge of bile from the tube was profuse and then rapidly diminished, becoming mucoid in character. The relief of the symptoms was immediate and complete. The patient began to gain flesh, and improved in all respects. By Aug. 22nd the stitches had been removed and the use of the glass tube dispensed with. On August 19th the motions began to assume a more healthy colour, and by the 25th were fairly natural; after this date they again by degrees resumed their clay-like appearance. By Sept. 1st the wound had healed, with the exception of a small sinus at the lower end, which discharged very little and gave no discomfort, being sometimes quite dry and at other times moist. The patient remained *in statu quo* during the greater part of September, suffering no pain or inconvenience.

Early in October she began to lose flesh, and rapidly increasing jaundice set in. She still complained of no pain, but on examination a well-defined lump was felt behind the scar of the incision, the lower part of which was beginning to open up again. This mass slowly increased in size, the patient becoming weaker and more emaciated. She ultimately died about the middle of November from exhaustion and jaundice, the result of a large malignant growth, occupying the upper part of the right side of the abdomen, which, although no post-mortem examination was obtainable, it is fair to assume had its commencement in the fibrous nodule felt deep down at the time of operation.

CASE 2. *Biliary colic; distended gall-bladder; cholecystotomy; malignant disease; temporary improvement.* (From notes by Mr. Cotes.)—A. T——, a married woman aged fifty-five, was admitted on Nov. 20th, 1890. With the exception of rheumatic fever twenty-three years previously she had never suffered from any illness, having been remarkably strong and well till three months before her admission into the hospital. At that time she began to be troubled greatly by constipation, the motions being hard and very light in colour. Shortly after this several slight attacks of pain occurred about the right side of the umbilicus. On Nov. 8th she was suddenly seized with very acute pain just below the liver region, which soon became unbearable, resembling "bad labour pain." After violent vomiting the pain disappeared suddenly, leaving her much exhausted, and, she thought, slightly jaundiced. For two months there had been loss of flesh. Fourteen days before her admission a hard lump was noticed in the abdomen on the right side, and had gradually been increasing in size. The family history was good. On admission the patient was emaciated, rather anxious-looking, and her complexion inclined to sallowness. She complained of pain over the upper part of the abdomen, with occasional nausea. Temperature 100·2°; pulse rather quick; tongue coated and dryish. To the right of the middle line, two inches below the liver margin, but apparently separated from it by a subresonant area, a hard rounded mass could be felt. This was irregular in outline on its inner side, movable, elastic, semi-fluctuating, and tender upon slight pressure. By Nov. 27th the tumour was distinctly larger and the patient's condition less satisfactory. It was therefore decided to explore the tumour, which, although its nature was doubtful, appeared to be probably a distended gall-bladder, associated with malignant disease, and it was thought that the pain might at all events be relieved by emptying the distended gall-bladder, whilst if by chance malignant disease were not the cause of the condition a permanent cure might be effected. The mass was exposed by a vertical incision over its most prominent part, the parietal peritoneum being, in accordance with Mr. Bennett's custom, stitched to the skin. As, when exposed, the tumour presented the appearance of a distended gall-bladder, it was emptied by means of an aspirator, a quantity of oily, semi-opaque material, not in any way like bile, coming away. It was also noticed that the cyst did not collapse whilst being emptied, as usually happens with a gall-bladder not adherent to surrounding structures. The tumour was then incised, with the ordinary precautions, and found to consist of a large cavity with walls about half an inch in thickness, from the inner surface of which projected a number of pedunculated bodies not unlike masses of lymph. No gall-stones were detected and no bile was seen. The edges of the incision in the cyst were attached to the margin of the abdominal wound, a drainage-tube inserted, and dressings applied in the usual way.

The patient was not much depressed by the operation, and progressed perfectly, being free from all pain till Dec. 7th, when, the stitches having been removed, the drainage-tube was about to be dispensed with, as there had been nothing but a little serous discharge since the operation. Upon this date, after a slight feeling of discomfort, a sudden profuse discharge of odourless watery fluid occurred which saturated the dressings. This continued, causing some irritation of the skin till Dec. 23rd, when the watery discharge gave place to reddened material, which Dr. Delépine reported upon as follows:—"Composed of serum and pus containing a pretty large number of bacteria; in the midst of the fluid there are small masses of cancerous epithelium. The tumour is evidently an epithelioma of the intestine or of one of the ducts of some gland." The patient still improved up to Dec. 30th, the wound having nearly closed and the discharge greatly diminished. From this date all improvement ceased, the wound showed no further inclination to heal, a large mass appeared below and to the inner side, and slowly increased in size.

On Jan 20th, 1891, the discharge became very offensive, and was partly composed of intestinal contents. The patient gradually wasted, the mass continued to increase, and the discharge from the sinus became more feculent. She left the hospital in February, but returned again in March, and died in April.

At the post-mortem examination the fistula in the abdominal parietes was found to pass into a large cavity, the walls of which were composed of new growth (large-celled sarcoma). Between this cavity and the hepatic flexure of the colon was a free communication. The new growth forming the walls of the cavity passed into the depression on the liver for the gall-bladder, and entirely replaced the latter structure. The common bile-duct could be detected surrounded by the disease which passed down to the biliary papilla in the duodenum. No gall-stones were found either in the growth cavity or bile-duct. Scattered about the peritoneum and mesentery were numerous secondary growths.

CASE 3 (under the care of Dr. Ewart and Mr. Bennett). *Acute biliary colic; cholecystotomy on apparently moribund patient; recovery.* (From notes by Dr. Lee Dickinson, medical registrar.)—H. R——, a man aged forty-two, was admitted under the care of Dr. Ewart on Feb. 16th, 1891, with the following history. Fourteen years previously he was in another hospital on account of jaundice and hepatic colic. After this he suffered occasionally from slight colic, but had no severe attack. Eight weeks before his admission into St. George's Hospital there was some jaundice and great constipation. Five weeks later a very severe attack of colic occurred, and the jaundice became more marked. On Feb. 3rd there was a rigor, and the same evening a tender swelling was found by his medical attendant in connexion with the right lobe of the liver. This swelling rapidly increased in size during the succeeding two days. Severe rigors followed on Feb. 13th, 14th, and 15th. On admission the patient was emaciated and anxious looking. Tongue furred; temperature normal; pulse small. On the right side of the abdomen there was dulness, with solidity and tenderness continuous with liver, and extending down to the umbilicus. No fluctuation was detected. On Feb. 19th the patient suffered from a severe attack of biliary colic.

Feb. 20th.—The colic continued and was much more severe. The patient lay with legs flexed on abdomen. There was occasional vomiting.

23rd.—More colic; frequent vomiting. Pulse very small; temperature 101°. A well-defined swelling was now easily felt, elastic and extremely tender, extending from the liver to a point about two inches to the right and below the umbilicus. Mr. Bennett saw the case in consultation with Dr. Ewart, and it was decided to lay open the swelling, which was thought to be the distended gall-bladder, although the condition of the patient seemed too desperate to offer much prospect of effectual relief.

24th.—Mr. Bennett performed cholecystotomy in the usual manner. The operation was simplified by the existence of recent adhesions between the gall-bladder and abdominal wall. A large quantity of greenish bile was evacuated; several small concretions and one gall-stone were removed. The patient almost died on the table, and the operation had to be terminated as rapidly as possible, a large drainage-tube being left in the wound.

25th.—Great prostration, but no vomiting and no pain. The legs, which had been continually flexed on the abdomen, were now extended. Very profuse discharge of

bile from the tube. Distinct jaundice. After this date the patient rapidly rallied, the temperature fell to normal, the jaundice disappeared, and the vomiting did not recur. Obstinate constipation, however, ensued, no action of the bowels taking place till March 4th, when two putty-like motions were passed.

The discharge of bile from the wound was profuse for four days after the operation, then rapidly diminished, being entirely replaced by a little clear fluid by March 3rd. On March 11th there was a slight attack of colic, and a small gall-stone about the size of a coffee berry was expelled from the wound. For the next two days there was occasional pain, and two more small stones came from the wound, being followed by a free discharge of bile. These attacks of pain recurred from time to time with diminishing severity till March 25th, after which they entirely ceased. No further symptoms occurred, and the man left the hospital on April 18th, fat and well-looking. All jaundice had disappeared. There was still rather troublesome constipation, but the motions were healthy in aspect. The wound had healed, with the exception of a small sinus at the lower end, from which a little serous discharge oozed.

Remarks by Mr. WILLIAM H. BENNETT.—The operation of cholecystotomy may fairly be considered so successful a method of treating symptoms arising from mere impaction of gall-stones that it is hardly necessary to make a point of recording cases of that kind. There is, however, another class of case in which the treatment, although equally justifiable, is followed by results which are either less perfect in themselves, or are obtained only after considerable interruption of the convalescence. It is to this class that the cases described above belong. They are recorded because one of them shows the strength of the operation as a means of saving life under apparently hopeless conditions, whilst the other two well demonstrate how much the treatment is weakened by the difficulty of diagnosis which is met with in many of these cases. The diagnosis of a distended gall-bladder is, as a rule, not difficult, but at the same time it is frequently impossible to foretell with any degree of certainty the cause of the distension. The cause may, it is true, be generally the impaction of a gall-stone, but whether this impaction is associated with malignant disease it seems impossible to tell in the early stage. It is also clear that patients may suffer from symptoms of biliary colic with distended gall-bladder, and yet when the gall-bladder is opened no stone may be found, the obstruction being apparently due to a small nodule of malignant disease about the duct. Such being the case, it is, I think, well to be cautious in the first instance in promising too much from the treatment. The operation should be regarded in the majority of cases as a purely exploratory proceeding, which, in the hands of those conversant with its details, is almost without risk. It is only by regarding the treatment in this light that it is to be saved from risk of some discredit, for it must be admitted that the results, although at first beneficial, are sometimes ultimately disappointing. In Case 1 nothing could have been more precise than the symptoms of distension from impacted stone, a diagnosis originally made and subsequently verified at the operation. There was, however, no indication of the coexistence of malignant disease, excepting perhaps the loss of flesh, a symptom seen in most cases of trouble produced by impacted stones, quite independently of any complication. That the operation was justifiable there is no doubt, for it relieved all pain, allowed the patient to gain flesh and strength, and certainly prolonged her life to some slight extent. The association of small nodules of malignant disease with impacted gall-stone is probably more common than it is ordinarily supposed to be. The relation of these conditions to each other is of great interest. Does the impacted stone cause the irritation which produces the new growth, or is the stone merely arrested by the malignant mass? It is obviously very difficult, if not impossible, to determine this point with any approach to certainty; but there is at all events sufficient probability that the impaction of the gall-stone precedes the onset of the malignant disease to make it justifiable, from a surgical point of view, to consider the desirability of opening a gall-bladder if chronically distended, although no symptom worth mentioning may have arisen, with a view to the removal of a source of irritation which, if left alone, may ultimately tend to excite the growth of malignant disease. In the second case the diagnosis was altogether more doubtful. Clear evidence of distension of the gall-bladder existed, but there was also a strong suggestion of malignancy. The operation revealed a very unusual condition of things, and the nature of the case was by no means plain. The necropsy showed pretty distinctly that the case was originally one of primary cancer of the gall-bladder—a very rare affection. Under these circumstances the plan which I followed, of draining the malignant gall-bladder, may be, perhaps, open to adverse criticism, since it is possible that the case would have done equally well if the incisions had been closed without drainage. On the whole, considering the doubtful character of the disease, the use of the drainage-tube was, I think, right; especially as the symptoms from which the patient suffered were apparently entirely due to the distension of the cyst. It was therefore probable that drainage would relieve the discomfort by preventing reaccumulation of the fluid. It may also be thought that the open wound in the parietes contributed somewhat to the formation of the fæcal fistula, but the aspect of affairs post mortem led me to conclude that this did not materially affect the case. Taking all the circumstances into consideration, I should in a similar case be inclined to follow the same course. The third case is an admirable example of the actual saving of life by this method of treatment. As will have been seen from the notes of the case, the patient's state was apparently hopeless; so much so, indeed, that I was compelled, in order to remove him from the table alive, to complete the operation before I could properly explore the deeper parts after the extraction of the first stone. The immediate benefit which followed the treatment was certainly extraordinary. The haste with which the operation had to be terminated necessarily rendered it incomplete. The result of this was the tedious convalescence caused by the spontaneous escape of the second stone and small concretions, which I have no doubt could have been easily removed at the operation if the state of the patient had been otherwise than it was. The small sinus existing when the man was last seen seemed likely to heal of its own accord; if it should not do so, I presume that its closure by operation will not be difficult.

LONDON COUNTY ASYLUM, HANWELL.

A CASE OF FATAL INJURY TO THE PERICARDIUM AND HEART; NECROPSY; REMARKS.

(Under the care of Mr. J. PEEKE RICHARDS, Medical Superintendent of the Female Department.)

WOUNDS of the cardiac region always present features of great interest, and the following case is one which presents unusual features. The patient, who was a lunatic, was unable to give an account of herself. This made the history very difficult to obtain, and the diagnosis much more difficult than it would have been had there been an account of the occurrence such as a sane person would have given. It will be observed that the patient did not die in consequence of the direct injury to the heart, but as a secondary result of ulceration into the coronary artery and hæmorrhage into the pericardium. Death from wound or injury to the heart may take place as a result of shock, of hæmorrhage into the pericardium, from anæmia of the lungs and brain, or from inflammation of the heart or pericardium. A case very similar to the following was mentioned by Mr. Croft[1] in the discussion on Mr. Callender's case, read before the Medico-Chirurgical Society. A boy who stated that a needle had been run into his chest, died of pericarditis, and it was found at the necropsy that the broken part had projected into the pericardium, and caused pericarditis, having rubbed against the heart in its movements. Gross had possession of a pericardium with a needle two inches long encysted, giving evidence of its having been there for a long time without causing serious injury. Several cases (nine out of thirteen) of punctured wounds of pericardium and heart are mentioned by Mr. Callender in his paper,[2] caused by the penetration of needles. In some of them the foreign body was found only at the necropsy; occasionally the history was unknown. In his case, where the needle was felt and removed, the patient recovered. The cases to which he alludes were chiefly taken from the tables of Fischer, all of which could not be verified. Since Mr. Callender's table Wyman[3] has brought

[1] THE LANCET, vol. i. 1873, p. 272.
[2] Ibid., Trans. Med. Chir. Soc., 1873
[3] Boston Med. and Surg. Jour., vol. ii., 1889.

forward a case somewhat similar in many respects to the case of Dr. Richards—that of a child who had a needle in the chest, which was probably embedded to some extent in the cardiac wall, and was removed with success. More than one instance of recovery after the removal of a needle which had penetrated is recorded, but in most the history has been clear, and there has been something locally to guide the operator. For the following notes we are indebted to Mr. J. Cautley Holderness.

The following case presents several interesting features apart from its surgical aspects.

A. A——, aged forty-one, was admitted into the London County Asylum, Hanwell, April 14th, 1888, suffering from chronic mania with delusions; she was very irrational and irrelevant in her replies to questions, occasionally excited and impulsive, but at other times industrious (would occupy herself doing needlework &c.). Her appearance was never very robust, but she enjoyed good health. She appeared to be in her usual health until April 7th, 1891, when she was seized with an attack of retching, and vomited a little. As she was menstruating at the time her indisposition was attributed to this circumstance. She was ordered to rest in bed. She remained in bed until the 11th, taking her food well, without any recurrence of the retching, and as she appeared to be better was ordered up again. After being up about three hours she had another attack of retching. Her face was flushed, and breathing a little hurried. Pulse quick and feeble; tongue slightly coated; temperature, as far as could be judged by the sense of touch, did not seem much elevated. The use of the thermometer was out of the question, on account of her extremely restless and excited state. She was at once ordered to bed. Owing to her mental state no assistance could be got in forming a diagnosis, as she refused to allow a physical examination to be made. She took her food fairly well during the day, but was restless and very abusive when anyone approached or attempted to do anything for her. On the morning of the 12th she appeared much worse; her face was slightly cyanotic and wore an anxious expression. Respiration shallow and hurried. For the first time since the commencement of her illness she allowed a physical examination to be made. Extensive dulness was found in the cardiac area, extending upwards almost to the left clavicle. Heart sounds were feeble, and indistinct respiratory murmur, loud and harsh; no râles could be detected. She continued in this state until 10.30 P.M., when the night nurse noticed a change for the worse. She was then in a state of collapse, suffering from severe dyspnœa. Her face, which wore an expression of intense anxiety, with wildly staring eyes, was markedly cyanotic and bathed in clammy perspiration. She was tossing about in a wild and excited manner. Radial pulse imperceptible. Stimulants were at once procured, but she refused to take any, and resisted when an attempt was made to give her some by means of a feeder. She died at 11.15 P.M., apparently from failure of the heart's action.

Necropsy, thirty-two hours after death. — The pericardium was thickened, more especially on the right side, and was distended by a large quantity of dark-coloured serous fluid. Lying at the most dependent part was a recent blood-clot about half an ounce in weight, and several small clots were floating in the fluid. On the front of the right auricle immediately above the auricular-ventricular furrow was a shallow, ragged ulcer (the size of a threepenny piece), the floor of which was covered with recent blood-clot. Embedded in the thickened pericardium opposite the site of this ulcer was the pointed end of a darning needle 1¼ in. long, the point being directed towards the heart and projecting a short distance into the sac of the pericardium. There were several patches of pericardial inflammation around the site of the needle. The ulcer had doubtlessly been formed by the heart rubbing against the needle, ultimately resulting in the erosion of a small branch of the coronary artery, and thus giving rise to the hæmorrhage into the pericardial sac which hastened the fatal termination of the case. The left side of the heart was empty, the right being filled with dark fluid blood. The other organs were healthy, but much congested. On Feb. 28th the patient was sitting at the table in the ward doing needlework. The nurse asked her for it, whereupon the patient threw it upon the table, and while the nurse was picking it up the patient seized her by the wrist. The nurse immediately called another nurse to her assistance, and while they were disengaging the patient's hands the nurse felt a sharp pain over the back of her wrist, which she attributed to a sprain, being quite unaware that anything had entered it. Her wrist continued very stiff and painful until April 8th, when the back of the hand became swollen and inflamed, and something projected under the skin, which on being extracted turned out to be the eye end of a darning needle, three-quarters of an inch long. This, when compared with the piece found in the patient's pericardium, appeared to be part of the same needle; although on comparing the two pieces with a darning needle of the same pattern (the only pattern used in the institution), about ⅝ in. was found to be wanting to complete the needle. As it is known that the patient was in the habit of putting needles in the front of her dress whilst at work, it is extremely probable that while freeing the nurse's wrist from the patient's grasp her hand came into contact with the patient's chest, and the eye end of the needle entering the back of the wrist caused the sharp pain she felt; the pointed end at the same time entering the patient's chest, the needle then breaking into three pieces, the middle piece being lost.

Remarks.—A point of great interest in this case, and one which renders it probably unique, is the strange way in which the time and manner of entrance of the needle into the body can be fixed, occurring as it did in a person whose mental condition was such that she never gave any indication that such an accident had happened. The matter would have remained enshrouded in mystery had it not been for the strong circumstantial evidence afforded by the injury to the nurse's wrist. This throws considerable light upon the case. Another interesting feature is the length of time the needle was evidently in close proximity to most vital parts without giving rise to any urgent symptoms. The exact point of entrance and the course it took to reach its final position are matters of pure speculation, as there was nothing in the post-mortem examination to throw any light upon this point. That the first symptom noted—viz., retching—was due to irritation of some branch of the pneumogastric is extremely probable. The case also indicates clearly the difficulties one has to contend against in the treatment of the insane.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Cystic Tumours of Jaw.—Aural Exostosis.—Lipoma of Spermatic Cord, with Hernia.—Ulcerative Colitis.—Infantile Syphilitic Caries of Calvaria.—Papilloma of Ary-epiglottidean Fold.—Myocarditis.—Psorospermia Cultivations and Inoculations.—Leprosy.—Cicatricial Contraction of Stomach.

THE annual general meeting of this Society was held on May 19th, the President, Dr. W. H. Dickinson, in the chair.

The report of the Morbid Growths Committee on the various specimens submitted to them was read; their conclusions were in the main confirmatory of the opinions expressed by the exhibitors of the specimens.

Mr. H. BERTRAM ROBINSON described a specimen removed from a man aged forty-nine, by Mr. Sydney Jones, on Oct. 18th, 1889. Ten weeks before admission he had a severe blow on the right side of the lower jaw, causing a little bleeding into the mouth, but no wound of the skin. This was followed in three weeks by pain and swelling. On admission there was a tumour the size of an orange on the outside and below the lower jaw fixed to the bone, and felt from within the mouth to be wrapping round its lower border. It extended from just outside the symphysis to the anterior border of the masseter. The skin was adherent and slightly reddened. No enlarged glands. On section it was rounded, with a fairly well-defined edge; the bone was not expanded, but its outer surface was eroded by the growth. It had a fibrous appearance, and scattered through it were small cysts. Microscopically, there was seen to be a fibrous stroma with extensive round-celled infiltration; embedded in this were epithelial masses arranged in a lobulated manner. On the outer side of these masses the epithelium was columnar, but in the centre the cells became spheroidal, and in some places vacuolated. There were no epithelial nests to be seen. The soft

tissue in the interior of the bone showed no growth at all, only a little inflammatory round-celled infiltration, and from this, coupled with the non-expansion of bone, it could be said definitely its origin was not central. The tumour strictly was not one "of the lower jaw," but "involving the lower jaw." Of a similar tumour he could find no record in pathological literature, but it bore some likeness histologically to some of the cystic jaw tumours described by Mr. Eve in his lectures at the Royal College of Surgeons in 1882. As to the origin of the growth, it must have started from one of the skin appendages or from some epithelial remnant in relation with the first branchial bar. If from the latter, which seemed the more probable, there was good reason for its resemblance to certain cystic jaw tumours which might arise from similar rudiments embedded in the maxilla; and, again, it was known that curious cystic epitheliomata arise in the neck lower down whose origin could only be associated with similar remnants in relation with the lower arches and clefts.

Mr. ROBINSON also described a Spheroidal-celled Carcinoma of Upper Jaw which was removed from a man aged fifty-five, by Mr. Clutton, and to him he was indebted for bringing the case before the Society. Two years before admission the patient first noticed a little lump on the left superior maxilla, just external to the canine fossa. There was from time to time discharge from the left nostril, and then the tumour disappeared. For the last four or five months before admission the swelling remained permanently, and continued to increase in size, and became painful at night. Five weeks before admission he noticed another lump, the size of a horse bean, at the lower margin of the left orbit. This had increased rapidly, and almost joined the primary tumour. The discharge from the nostril, which had ceased, reappeared during the last four or five days. There was a small gland below the jaw, which had been present almost the same time as the first swelling. On admission there was marked fulness over the left superior maxilla, especially below the left orbit, where there was a localised soft elastic swelling attached to the bone, but the skin was free over it. Below this was general swelling over the maxilla, quite hard and resistant. The soft elastic growth extended to the posterior extremity of the alveolar margin. No enlargement of alveolus or depression of palate, no bulging between cheek and jaw, no prominence of left eye. No obstruction of left nostril, but some obstruction of lacrymal duct. The gland below the jaw was hard, but freely movable. At the operation the growth was found to have arisen within the antrum, and to have absorbed its anterior bony wall; the orbital surface of the superior maxilla was involved, and it extended also into the nostril, and backwards into the spheno-maxillary fossa. The growth was fairly firm, and of a pale grey colour, and it was apparently all removed. The gland below the jaw was removed a few days later. Microscopically, the growth was seen to be epithelial, varying considerably in structure. The epithelium was arranged in alveoli, and of a spheroidal shape; in some of the alveoli the cells were identical in shape throughout, with well-marked nuclei, while in others they were very swollen and irregular in size, with nuclei not so well marked, and many of them vacuolated. There was no evidence of nest formation. The connective tissue showed extensive round-celled infiltration. The gland also showed that it was invaded by typical spheroidal carcinoma. The type of this tumour was that of a spheroidal carcinoma—a very rare, if not previously undescribed, tumour in this region. Although suggesting at the operation a columnar-celled growth, there was no trace in any of the sections of a columnar epithelium at the periphery of the cell masses. There could be little doubt that the growth started in the mucous membrane of the antrum; but, instead of growing from the surface epithelium, it had arisen from the acini of the secreting glands. Recurrence of this growth had since taken place.

Mr. BALLANCE showed a large Aural Exostosis which he had removed from the temporal bone of a married woman aged twenty-four. Since the age of twelve there had been a history of ear trouble, which had been worse during the last three years. Last October a mucous polypus was found projecting into the concha, and there was a solid growth blocking the tympanic canal, except at the anterior and upper part. It was of osteomatous nature, and measured three-quarters of an inch in diameter. The father had had a growth removed from the ear.

Mr. ROUGHTON showed a specimen of Lipoma of Spermatic Cord with Hernial Sac, taken from a dissecting-room subject. It exhibited a small inguinal hernia in front of and adherent, to which was a small lipoma continuous with the subperitoneal fat near the internal abdominal ring by a thin pedicle. He suggested that the lipoma had arisen in the subperitoneal fat and travelled down the cord, drawing the hernial sac after it.—The PRESIDENT asked if there was any evidence that the fat was produced by irritation from the presence of the hernia.—Mr. STEPHEN PAGET had seen a similar specimen, but in that the sac was much larger than the lipoma, and reached down into the scrotum. He failed to see how the fatty tumour could have dragged down such a sac.—Dr. ROLLESTON said that a specimen of lipoma in connexion with hernial sac was in the museum of St. George's Hospital.—Mr. ROUGHTON, in reply, expressed his conviction that the lipoma preceded and was the cause of the hernial sac, and he referred to a paper strongly upholding this view, published by Mr. Jonathan Hutchinson, jun., in an earlier volume of the Transactions.

Dr. SEYMOUR SHARKEY read a paper on Ulcerative Colitis, from the notes of Dr. C. D. Green, with whom he had seen the case. The patient was a woman aged thirty-three years, married, and had had one child, which was six years old. She was first seen by Dr. Sharkey in January, 1890, when she had had a longitudinal fissure in the dorsum of the tongue, which took several weeks to heal, and iodide of potash had no effect upon it. There was no evidence of syphilis. On Sept. 16th, 1890, she complained of diarrhœa and abdominal pain, which did not yield to treatment, but got steadily worse. The motions were mostly finely divided and dark in colour, with an occasional mixture of blood. There was occasional vomiting. He took the temperature often, but not every day, and only on one occasion was it at all raised, being 101°. The diarrhœa was constant, and uninfluenced by diet. The patient had an attack of erythema nodosum involving both arms and both legs, which ran an ordinary course. She gradually and slowly emaciated, and died exhausted in about ten weeks from the commencement of her illness. There had been abdominal pain and tenderness for some days prior to death. At the necropsy he found the whole length of the large intestine, from the cæcum to the termination of the rectum, extensively ulcerated, and so thin that it was difficult to remove it from the body without tearing it. Two perforations had taken place, one in the cæcum and the other in the sigmoid flexure. The ulcers were for the most part confluent, but here and there were some more isolated, the edges of which were well defined. In one or two places a slough could be seen. Only one ulcer was found in the small intestine, rather high up. The rest of the organs were healthy. In the large intestine it might be seen that the inflammation and ulceration had made great havoc. The greater part of the mucous membrane was gone. Here and there irregular islands remained, but over the greater portion of the bowel the muscular coat was exposed, and the surface as a whole was pretty smooth. One or two perforations were seen. Two other very similar cases were described, in which profuse diarrhœa, with blood and mucus in the motions, terminated fatally, and similar ulceration of the large intestine was found. In one case, very high fever was present all through the course of the disease. Such cases had not received much attention, and were not as a rule taken into consideration when an obscure case of diarrhœa presented itself clinically. Mild cases perhaps not infrequently recovered, but such as had been described seemed to terminate regularly in death. It was not improbable that several causes might be capable of giving rise to ulcerative colitis, and it was not certain that in some, at any rate, the same cause was not in operation which produced true dysentery.—The PRESIDENT could not see in what way the two cases last related differed from dysentery, many sporadic cases of which had come under his notice in London.—Mr. H. B. ROBINSON said he showed a card specimen of a very marked instance of this disease, taken from a man aged sixty-six, who had suffered from excessive melæna. He was the subject of chronic renal disease, and left inguinal colotomy gave temporary relief. At the necropsy a large ulcer was found in the sigmoid colon, and several small punched out ones in the descending colon.—Dr. ALLCHIN had seen several cases. He did not regard them as truly dysenteric, for the symptoms and the character of the stools were different. The cases usually occurred in constipated women, and were catarrhal in character, and there were distinct areas of tenderness along the course of the colon.

The symptoms were of short duration compared with the severity of the lesions found post mortem.—Dr. GOODALL had seen two cases at Guy's Hospital. One, in a woman of thirty, had existed several months, and the other, in a woman of twenty-five, presented symptoms suggestive of typhoid fever. He dwelt on the importance of rectal examination, which revealed the presence of ulceration in both the cases related.—Dr. SHARKEY, in reply, said that the objections to regarding these cases as true dysentery seemed to be clinical rather than anatomical. Though all the cases he had described occurred in women, he pointed out that Dr. Hale White regarded the male sex as most frequently affected.

Dr. PAYNE showed a specimen of Syphilitic Caries of the Calvaria in an infant admitted into St. Thomas's Hospital when nine months old, suffering from diarrhœa and stoppage of the nose with "snuffles." The symptoms and general aspect led to the diagnosis of congenital syphilis, though there was no eruption, and a course of mercury and chalk in small doses was given. Under this treatment the snuffles subsided, and the general condition improved. However, while under observation the bones of the skull, which were natural on admission, were noticed to become irregular, with deep depressions; but there was no external sign of inflammation. The child died in a month with symptoms of bronchitis. On post-mortem examination, the cranial bones were found irregularly excavated on the upper surface under the periosteum, which was intact, with an appearance like that of syphilitic caries in the adult, being quite unlike the usual craniotabes of congenital syphilis. The nasal bones were unaffected. Caries of this kind seemed to be, if known at all in congenital syphilis, excessively rare.

Dr. SEMON and Mr. SHATTOCK showed a Laryngeal Growth which had been removed by the former with the galvano-caustic snare from the left Ary-epiglottidean Fold of a gentleman aged forty-four. The patient had been sent to Dr. Semon by Dr. Malbranc of Naples with the diagnosis of angioma of the larynx, which had been corroborated by Professor Massei. On examination a tumour was seen of the size of a small mulberry, springing apparently from the left pyriform sinus, and overhanging the entire left posterior part of the larynx. It was mostly bluish, in part bluish-red, somewhat lobulated, and had a smooth surface, so that its appearance seemed to justify this diagnosis. After removal the tumour entirely gave the impression of an angioma, but on microscopic examination turned out to be a genuine papilloma, completely encased in a shell of partly recent, partly organised blood-clot. The interesting features about the case were (1) the unusual situation of the papilloma, (2) the occurrence of spontaneous hæmorrhage, which in laryngeal papillomata was practically unknown, and, (3) above all, the formation of a complete blood shell around the real tumour, which entirely concealed the true nature of the latter. The authors were not aware that a similar case had ever been reported.

Dr. ROLLESTON showed a Heart in which there were marked Interstitial Myocarditis and Fatty Infiltration limited to the right auricle and ventricle. The pericardium was very firmly adherent indeed all over the right side of the heart; over the left side the adhesions were less firm and not so thick. The heart weighed twenty ounces, the right ventricle was dilated and hypertrophied, its endocardial lining was covered with a thin film of adherent and decolourised ante-mortem clot. The tricuspid orifice was widely dilated; the segments of the tricuspid and pulmonary valves were normal. There were thickening and slight stenosis of the mitral valve and hypertrophy of the left ventricle. The myocardium of the left ventricle was healthy, that of the right side was a pale yellow colour, non-resistant and brittle. On microscopic examination there was marked fatty infiltration, there was fibrous increase spreading in from the pericardial surface which separated and compressed the muscle fibres of the heart wall. The muscular fibres were granular, and in many, though not in all, had lost their transverse striation. The limitation of the change in the myocardium seemed to depend on the fact that the adhesion and thickening of the pericardial layers was far more marked over the right, or anterior aspect of the heart, than on the left or posterior surface. The intensity of the pericardial inflammation, which was rheumatic in origin, was propagated to the myocardium. The greater intensity of the adhesions over the front of the heart was probably due to the effusion which accompanied the rheumatic pericarditis collecting by gravity, the patient being horizontal behind the heart, and thus separating and preventing early adhesions of the inflamed pericardial surfaces there, while they were allowed to unite and form adhesions anteriorly.

Dr. DELÉPINE showed some cultivations of Psorospermia. He said that bodies resembling psorospermia had been observed by him several times during the last two years in tumours of the skin and mucous membranes, and of the liver, obtained from various human subjects. These bodies were identical with those described by Darier and those exhibited lately at the Medico-Chirurgical Society by Mr. Bowlby and Mr. Hutchinson, jun. The entire absence of definite characters or reactions rendered it impossible at the present time to speak positively of the nature of these psorospermoid cells. This did not necessarily prove that they were not psorospermia. In order to solve, if possible, this difficulty, and to prepare the ground for inoculation experiments, the author had for the last few months cultivated psorospermia obtained from the rabbit's liver, and had succeeded in following their development through various stages. Interlamillar films of distilled water, serum, nutrient gelatine, and other fluids were inoculated. By this method the changes occurring in individual psorospermia could be followed for weeks. Briefly speaking, the following changes had been observed. In nutrient albuminous fluid subdivision of the protoplasmic contents of the encapsulated bodies occurred rapidly, in less than a week. At the end of that time about half of the parasites under observation contained two or four oval bodies. These so-called psorospermia or spores did not retain long their oval or round shape, but soon assumed an elongated form, and showed slow amœboid motions, becoming in turn cylindrical, pyriform, fusiform, oval, and round. In most cases not more than four of these bodies were formed, but occasionally five, six, and perhaps more, were observed. They became in time very slender, and seemed to coalesce so as to form a long coiled filament within the capsule. They sometimes assumed the hooked form described by Eimer and Schneider; but this was not universal. Small round bodies highly refracting light and resembling much blood-corpuscles in shape were found in all the vermiform bodies (sometimes one, generally two or more). These bodies were also found on the surface of many organisms, as if in the act of passing through the capsule. Their escape, however, was not actually observed. Similar bodies also became more and more numerous in the surrounding nutrient medium. At the end of a month some of these small protoplasmic masses had nearly doubled in size, others were elongated, and not a few showed evidences of multiplication. These small bodies seemed to show no evidence of structure, but one end was often brighter than the other. It was therefore possible to observe very definite changes in psorospermia cultivated in suitable media. If by the same methods similar changes could be demonstrated in the bodies observed in tumours and in Paget's disease, the nature of these bodies would cease to be doubtful.

Drs. DELÉPINE and SLATER related a case of Leprosy. They were indebted to Dr. Cavafy for permission to publish some observations made by them on the case, which was under his care in 1889. These observations consisted of: 1. Numerous attempts to cultivate the bacillus made independently at two different periods during the life of the patient, and on both occasions with negative results. 2. Attempts to demonstrate the bacillus in the blood and lymph obtained from tubercles in various stages and in the exudation from ulcers. These also gave negative results, except that in a small ulcer of the ear bacilli were found abundantly in the pus. 3. Repeated examinations of the sputa during the last year of the patient's life. The sputa contained a very large number of bacilli which could not be differentiated positively from the bacillus tuberculosis, but presented peculiarities in number and distribution. These were not, however, sufficiently marked to justify a definite diagnosis. 4. Examinations of the lesions found in various organs after death. The lungs being extensively diseased, this case seemed to afford a good opportunity to investigate the question whether the lung lesions were tubercular or leprous. The existence of a leprous phthisis had been doubted by many observers. Inoculations being out of the question in this case, for several obvious reasons, the investigation was necessarily confined to a study of the properties of the bacilli, of their distribution in the tissues, and of the nature of the lesions. The various staining methods given for differentiating the bacillus of leprosy from that of tuber-

culosis were found to be untrustworthy, because—(1) All the methods which successfully stained the bacillus of leprosy were found to stain undoubted tubercle bacilli (an account of this research would be found in a paper by Dr. Slater); (2) because the same bacillus varied in staining reaction according to the organ from which it was obtained. The study of the distribution of the bacilli and the nature of the lung lesions showed numerous differences from ordinary tubercular phthisis, and many points of analogy with the appearances found in organs other than the lungs. The authors concluded, with Bonome and Arning, that a true leprous phthisis existed. Among various anatomical facts, interesting as bearing on questions of etiology or on points in dispute, the following seemed specially worthy of attention: 1. The existence of masses of bacilli, both discrete and in typical leprous cells, in the Haversian canals and spaces of the bones of the little finger in which the usual mutilating lesions were commencing. 2. Of the ulcers examined only one of those found in the skin showed any bacilli in the exudations. In the intestine nearly all the ulcers showed abundant bacilli in the necrosed elements at the bottom of the ulcer, and in the cellular infiltration forming the walls. In the lung the walls of the cavities were covered with an almost pure culture of bacilli, with hardly any admixture of cells or cell débris. 3. The intestinal lesions were almost entirely confined to the large intestine, and did not present the usual characters of tubercular ulceration. These lesions were undoubtedly much more recent than those of the skin. 4. There seemed strong evidence that the skin was primarily affected, and that the parasite gradually extended from the surface of the body to the deeper parts, in great measure along the lymphatics.

Messrs. SHATTOCK and BALLANCE read a paper on Negative Results of Psorospermial Inoculation in Animals. They recounted a series of experiments made upon different animals with the object of seeing whether experimental infection could be brought about from the psorospermial bodies so common in the rabbit's liver. They were led to do this after Darier's description of the presence of psorospermia in the epidermis in Paget's disease of the nipple, and the alleged association of psorospermia with carcinoma in general. The experiments were made on rabbits, monkeys, dogs, and rats, and, although the results had been negative, the authors thought it worth while to record them in order that others who took up the same inquiry might modify the method adopted as experiments with other forms of psorospermia or with other classes of animals. The plan consisted in picking out the psorospermial material from the livers of rabbits just killed, and with this at once inoculating the animals referred to. The chief experiments were performed on rabbits as being the most likely to receive infection. The method was to scarify the ear on the inner aspect (under chloroform), or to make one or more long valvular incisions, and then to press or rub into the wounds, after bleeding had ceased, quantities of the psorospermial material. Similar vaccination experiments were made upon the ears of two monkeys, and also on the ears of dogs. The wounds healed by scabbing and without suppuration. In the case of rabbits, small, firm, rounded elevations, and in the case of the incisions, elevated lines, appeared at the part; but these did not increase, and microscopic sections of the case showed the elevations to be due to reparative hyperplasia of the injured cartilage; no trace of the psorospermia remained. The authors also injected into the internal jugular vein of two healthy dogs large quantities of psorospermial material suspended in sterilised distilled water or in warm salt solution; but careful examination after death, five or six months later, showed no lesions whatever in the viscera; the lungs were perfectly healthy. Although nothing could be held as finally disproved from such experiments, the authors submitted that Darier's views must be tried by Koch's postulates. Until a culture had been made from cases of Paget's disease or from carcinomatous tumours, and the lower animals or human subject experimentally infected, nothing could be taken as proved in regard to a causal relation between psorospermia and the conditions with which they were alleged to be associated. The authors found a successful culture fluid in the blood serum of the rabbit sterilised discontinuously and used in a fluid state.

Mr. GOLDING BIRD and Dr. PITT showed a man aged thirty-four with Extreme Contraction and Cicatrisation of the Stomach due to Corrosive Poisoning. The patient was suddenly seized with symptoms of acute irritant poisoning in November, 1888, suffering intense epigastric pain, with frequent vomiting, and hæmatemesis. The incessant vomiting continued, and three months later he had greatly emaciated. An œsophageal bougie passed without difficulty, but all food caused intense pain, and was returned at once unchanged. At the end of January, 1889, Mr. Golding Bird performed gastrostomy with a view to dilating the pylorus later. What appeared to be the stomach was attached to the abdominal wall. This was opened the next day, and food was introduced through the opening. The patient died from inanition five days later. At the inspection the stomach was found drawn up under the ribs, and contracted to a sac five inches long and two and a quarter broad. The mucous membrane was almost entirely destroyed, and the pylorus would only admit a No. 8 catheter. The lower part of the œsophagus was cicatrised and scarred, with some contraction at the cardiac orifice and also two inches higher up. The opening had been made in the duodenum owing to the abnormal position of the stomach.

Annual Meeting.

The annual meeting of the Society then took place. The report of the Council showed a flourishing state in point of numbers, though the expenditure had slightly exceeded the income. Some alterations had been made in the by-laws, extending the sphere of usefulness of the Society, and the duties of some of the officers had been revised. The following were elected to serve during the ensuing year:—President: Sir George Murray Humphry, M.D., LL.D., F.R.S. Vice-Presidents: Sir Joseph Fayrer; William Tennant Gairdner, M.D., LL.D.; Frederick William Pavy, M.D., F.R.S.; P. Henry Pye-Smith, M.D.; Sir Joseph Lister, Bart., D.C.L., LL.D., F.R.S.; J. Neville C. Davies-Colley; J. Warrington Haward; and Henry Trentham Butlin. Treasurer: William Cayley, M.D. Honorary Secretaries: S. G. Shattock and Francis Charlewood Turner, M.D. Council: William Henry Bennett; Sidney Coupland, M.D.; F. G. Dawtrey Drewitt, M.D.; William Ewart, M.B.; Richard G. Hebb, M.D.; Percy Kidd, M.D.; William Arbuthnot Lane, M.B., M.S.; David B. Lees, M.D.; Frederick Walker Mott, M.D.; G. Newton Pitt, M.D.; D'Arcy Power, M.A., M.B.; Charles A. Ballance; Edgar Crookshank; R. J. Godlee, M.S.; William Hickman; Jonathan Hutchinson, jun.; George Henry Makins; Herbert William Page, M.C.; Samuel West, M.D.; and German Sims Woodhead, M.D.

Dr. W. H. DICKINSON, in vacating the presidential chair, said it only remained for him to say a few words in acknowledgment of what had been said on that the last occasion of his meeting the Society as its President. He felt deeply the honour which had been conferred upon him, and he would look back upon his term of office as one of unalloyed gratification both from the uniform courtesy and consideration which he had received from the members and from the kindness and cordial coöperation he had experienced at the hands of the officers, especially the secretaries, to whose efforts more than to any other circumstance the prosperity of the Society was due. In this acknowledgment he desired to include, not only the present officers, Dr. West and Mr. Shattock, to whom he owed much, but also Mr. Godlee, to whom he owed no less, who was secretary in the earlier part of his term of office. He thought it would be admitted that the Society had in no respect fallen off from its old reputation, but had advanced with the times and kept on the crest of the wave of progress. A change, which he considered to be a most judicious one, had, as already stated, been made in the rules, in virtue of which they were free to discuss pathological processes in their widest sense, without any restriction as to the exhibition of specimens. They were no longer a society for the display of pathological products, but one which took for its function the science of pathology in its widest scope. The matters which had recently been before them would excite the astonishment of their founders could they be made aware of them, more especially what related to micro-organisms, whether animal or vegetable, in their relations to disease. Only recently they had before them new observations with regard to the essential causes of cancer and of diphtheria, with regard to which, though it was too early to speak confidently, as he was sure their authors would be the first to allow, yet they showed in what manner and to what ends they were working. The practical possibilities in the future, as the results of the kind of work they did, included a harvest of tangible good not less than could be anticipated were the treatment and

prevention of disease among their recognised aims. The harvest was near. Let them be content if they only sowed the seed, leaving it to others to reap the crop, which but for them and their fellow-labourers they never would have seen. He need not dilate upon the melancholy topic, the losses by death which the society had sustained during the past year—this had been dealt with in the Council's report—but he could not forbear to refer to a circumstance of another kind, though the same report had not failed to do justice to it. He referred to the approaching completion of his seventieth year by their distinguished honorary member, Professor Virchow. Professor Virchow occupied so exceptional a position that the Council had proposed to take a no less exceptional course, and to signalise the event by the congratulatory address which had been read. That it might be long before this eminent, he might say super-eminent, member of their society claimed notice of a different kind must, he was sure, be the wish of everyone who honoured transcendent ability associated with uprightness and public spirit. He ended as he began, by reiterating his sense of the honour which the Society had bestowed upon him; and if he might venture on his departure to prophesy, it would be of the increasing prosperity and scientific importance of that Association—issues which he was sure would be promoted by the accession of his respected teacher, Sir George Humphry, to the position which had been far less worthily occupied by himself.

The following card specimens were shown:—

Dr. S. WEST: Secondary Sarcoma of Lung.

Dr. A. F. VOELCKER: Tuberculosis of Thyroid.

Dr. ROLLESTON: Lung invaded with Myxo-Sarcoma.

Mr. H. B ROBINSON: Ulcerative Colitis.

Dr. W. H. ALLCHIN: Pigmented Intestine and Adrenals from a case of Addison's Disease.

Mr. J. H. TARGETT: Entero-Cystoma from Ox.

Dr. F. HAWKINS: (1) Aneurysms above and involving the Sinuses of Valsalva—Death by Rupture of one into the Pericardium; (2) Malignant Tumour of the Ileo-Cæcal Valve.

Dr. LAURISTON SHAW: Contraction of Stomach from Chronic Inflammation.

After the usual votes of thanks to the retiring officers the Society adjourned.

OPHTHALMOLOGICAL SOCIETY.

Arterio-venous Aneurysm of the Orbit.—Parageusia with Ophthalmoplegia.—Emphysema of the Conjunctiva.—Eyelashes in the Anterior Chamber.—The Formation and Pathology of Pyramidal and Central Anterior Capsular Cataracts.

AN ordinary meeting of this Society was held on May 7th, the President, Mr. H. Power, in the chair.

Mr. RICHARD WILLIAMS (Liverpool) read a description of a case of Arterio-venous Aneurysm of the Orbit. The patient, a youth, aged fourteen, had received a kick from a horse on the left temple. The left eye had been "swollen out" ever since the accident, and the swelling was gradually increasing. At the upper and inner angle of the orbit there was an oval swelling about the size of a small walnut, which distinctly pulsated. Ligature of the common carotid was performed, and the pulsation ceased, but returned in some degree later, and then gradually subsided, until one day, whilst weeding in the garden, the eye felt suddenly painful, and the lids became swollen. Since then the pulsation entirely ceased, and the appearance and vision of the eye became normal, all that remained being slight ptosis and contraction of the pupil. Mr. Williams cited other cases in which recovery had occurred after compression or ligature of the common carotid, and expressed his opinion that this latter was the most satisfactory method of treatment.—Mr. WHERRY (Cambridge) had tied the carotid in a lad exhibiting similar symptoms after sustaining a fracture of the base of the skull. Subsequently there were double ptosis and optic neuritis. The operation was followed by grave symptoms—coma lasting fourteen days, hemiplegia on the opposite side of the body, with contraction of the limbs, and almost complete loss of reason. No doubt the brain had been seriously bruised at the time of the accident; probably some thrombosis had occurred, and extended rapidly when the blood supply was retarded by ligature of the carotid. So far as the operation was concerned, the immediate recovery was all that could have been desired.—Mr. FROST mentioned a case under his own care in which the condition remained stationary for some years, and the patient was able to follow his occupation as a wheelwright. He deprecated early interference in such cases, as a considerable number of spontaneous recoveries were on record.—Dr. MULES (Manchester) mentioned a case in which intermittent pressure on the carotid was applied by the patient himself with perfect success.—Mr. CHARLES LEE (Liverpool) said he had had the advantage of seeing both the cases mentioned by Mr. Richard Williams, and he was an advocate for early operation. In one of the cases mentioned operation had been postponed, and severe hæmorrhage occurred from dilated veins in the eye of the affected side, and the sight had been lost.—Mr. SILCOCK mentioned a case he had shown to the Society some years ago. No operation had been performed, and the man was now in practically the same condition as when first seen.—Mr. TATHAM THOMPSON (Cardiff) referred to three cases of arterio-venous aneurysm of the orbit. One, a girl aged ten, perforated the orbit by falling on a knitting needle. The aneurysm which ensued was completely cured by electrolysis. In the second case, also in a child, the orbit was penetrated by the frame of an umbrella. In the third, a woman aged forty, during a severe fit of coughing in pregnancy, experienced the sensation of a pistol crack in the eye, and ever after heard a buzzing noise. The bruit could be stopped by pressure on the carotid.—Mr. CROSS (Bristol) referred to the case of a child fifteen months old in which the symptoms appeared after a fall. No operation had been performed. Recent rapid increase in the symptoms made it doubtful whether the case was not one of new growth.

Mr. WHERRY (Cambridge) read a paper on Parageusia with Ophthalmoplegia. A gentleman, aged forty-seven, who was first seen on Dec. 9th, 1890, had homonymous diplopia, worse on looking to the right. The right eye was kept shut in walking to avoid dizziness and double images. No signs were present of tabes dorsalis or of optic neuritis. Both pupils were dilated, and did not act to light or in accommodation. The vision was not affected in either eye. He could read J. 1 at 10 in., and write perfectly with both eyes, using his accustomed glasses. Three days before the attack began, when he was in his usual good health, he noticed at table that everything tasted bitter; he thought that saliva collected a little more on the left side of his mouth; he had then occasional diplopia. On Dec. 16th there was marked divergence and crossed diplopia, but each eye separately would move well to the canthi, with no weakness of any single muscle; convergence was impossible, and all near work was done with one eye, the left for choice. Some patches of numbness were noticed on the outer side of the left thigh and on the left little finger. Severe nocturnal pains in the head and scalp were relieved by hot compresses. The taste symptom had been a serious distress; even water was too bitter to be touched. Hungry, and with a clean tongue, the patient was unable to dine. A glass of champagne was tried, but it was found impossible to drink it. This parageusia lasted acutely during five days. The external squint and dilatation of the pupils remained until ten days later, when all pain disappeared. The pupils were smaller, acted slightly to reflected light, and attempts at convergence could be seen. After another ten days the pupil acted to light, and convergence and single vision were possible with effort. The symptoms finally passed away about two months from the onset. There was a history of syphilis twenty years before. The patient was married, with three healthy children. In the treatment, iodide of potassium was pushed to 110 grains daily. Butcher's meat and alcohol were avoided, and a midday sleep was obtained. Mr. Wherry thought it probable that the ocular symptoms were due to a syphilitic lesion affecting the nuclei of the third nerve about the aqueduct of Sylvius. The palsy of convergence and dilated pupils without affection of accommodation, pointed to a very minute lesion, and offered interesting clinical evidence of the existence of centres which separated the various functions. In reference to the distressing disturbance of taste, it might be found to be more common in functional disorders, and cast a doubt on the origin of the attack. The patient himself thought it due to a cerebral hæmorrhage during sexual excitement.

Mr. TATHAM THOMPSON (Cardiff) read notes of a case of Emphysema of the Conjunctiva occurring in a clergyman aged about thirty. After breakfast on the day he was examined, and whilst blowing his nose rather violently, he

felt a sudden "shock," a sensation as of something gradually covering the right eye, and a peculiar "stiffened" feeling in it. He had no pain. On examination the right eye was found to be displaced downwards two-thirds of an inch, and forwards half an inch. Both lids tensely stretched, purplish colour, and with superficial veins engorged. Cornea clear, but surrounded and partly overhung by an enormous chemosis of the ocular conjunctiva, of a bluish colour, and almost non-vascular. This "bullous" conjunctiva protruded far between the lids. Crepitation was readily elicited on palpation. The conjunctiva was snipped in a radial manner, the air escaping with each snip, the remainder squeezed out, and the eye returned by steady pressure and massage. All uncomfortable symptoms at once subsided, and vision rapidly returned. The eye was still slightly misplaced downwards and forwards, and it was found that ten or eleven years before he had been operated on by Mr. Edgar Brown for exostosis of the orbit, and there had been slight permanent displacement since then. The eye was kept lightly bandaged for twenty-four hours, and forty-eight hours after all traces had disappeared. There had been no recurrence.

Mr. LAWFORD (for Mr. G. D. Johnston, of Vancouver) read notes and showed a sketch of a man who had received a wound of the cornea from a piece of wire, which had carried five eyelashes into the anterior chamber. These were subsequently removed by operation, with recovery of a useful eye.

Mr. ERNEST CLARKE reported a case of Eyelash in the Anterior Chamber occurring in a boy aged thirteen under his care, who had wounded his eye with a knife. An eyelash was carried into the eyeball, the bulb of the cilium remaining in the corneal wound. It was extracted eight days after the accident.—The PRESIDENT alluded to the case of a sailor who received a wound from a clasp-knife, by which an eyelash was carried into the anterior chamber, where it remained for some months, giving rise only to slight irritation.—Mr. CRITCHETT mentioned a somewhat similar case.

Dr. MULES read a paper on the Formation and Pathology of Pyramidal and Central Anterior Capsular Cataracts, limiting his observations to the class of cases where there was no proof of previous corneal perforation. From a case of his own, where persistent bands of pupillary membrane remained attached by their apices to a central cataract, and by their bases to the larger circle of the iris, he inferred that the central spot was a patch of cretified pupillary membrane, with or without a lymph cone, and he instanced McKenzie's observation of the ease with which many of these spots could be brushed off the capsule, leaving it intact, as confirmatory of his own view; he further pointed out the importance of this explanation in reference to other congenital lenticular opacities.—Mr. MARCUS GUNN said that he had suggested a nearly similar explanation for some cases of anterior capsular cataract in a paper he published in the *Ophthalmic Review* a few years ago.—Mr. HARTRIDGE mentioned the case of a boy aged fourteen, in whom an extensive perforation of the cornea occurred, and where the lens was for some days in contact with the cornea; yet the resulting nebula was very insignificant. It was only in young children that capsular cataract was believed to follow such accidents. He thought perforation of the cornea might leave very little evidence besides damage to the lens. The hypothesis put forward by Dr. Mules would require the persistence of pupillary membrane in many more cases than were at present met with.—Mr. STEPHENSON said that he met with remains of pupillary membrane very frequently.—Dr. MULES said, in reply, that it had been stated by Wells that perforating ulcer of the cornea in these cases need leave no nebula. The author of the paper had never seen such a case. Those he mentioned showed no trace of a nebula and gave no history of any inflammatory change. In three the condition was unilateral.

The following card specimens were shown:—

Mr. LAWFORD: (1) Retinal Hæmorrhage and Exudation, with Venous Thrombosis; (2) Subconjunctival New Growth (?) Gumma.

Mr. R. WILLIAMS: Dermoid of Cornea and Conjunctiva.

Mr. SPENCER WATSON: Dermoid of Cornea and Conjunctiva.

Mr. ERNEST CLARKE: Absence of Iris, with Opacity of Lens, after Injury.

Mr. LANG: New Growth, (?) Sarcoma, at Sclero-corneal Junction.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

A MEETING of the State Medicine Section was held on May 1st.

On the Fifth Year of Medical Education.—Dr. FALKINER read a paper on this subject. The author, referring to the resolutions of the Medical Council of 1889-90, pointed out that, in order to be qualified for holding a Poor-law appointment, six, and not five, years of study were required. In defence of the short period of study at present in vogue, Dr. Falkiner referred to the abuse of hospital and other charities, and also the state of degradation that some of the English general practitioners have fallen into. He urged that the expense of medical education was more than equivalent to the value received by the student, and objected to any increased outlay. He advocated the method adopted by the Conjoint Board of England, who in the minor subjects make the examination, and not the certificate of the teacher, the standard of their degrees, and finally spoke strongly of the pupil's residence in a general hospital with an out-patient department as the true foundation of the medical student's training.—Dr. R. MONTGOMERY said, after over twenty-five years as an examiner in the Apothecaries' Hall, he found that general answering had deteriorated. He thought that attendance under dispensary officers would be most advantageous. Pharmacy was the great deficiency. Few men now were able to write prescriptions after the manner of Hudson and other learned Presidents. He thought the additional year was advantageous, as it would lessen the number of men going to the profession, and perhaps lessen the disgraceful practice that was carried on in England of 6*d.* and 1*s.* dispensaries.—Dr. J. W. MOORE noticed that Dr. Falkiner considered the fifth year proposed by the General Medical Council to be in reality a sixth year, since a diploma in State Medicine, with a year's curriculum, would in future be required in addition to the proposed five years' curriculum. But, in his opinion, the suggested reform by the General Medical Council would really reduce the curriculum to three years, the first year of medical study being practically spent in non-medical schools and non-medical courses, while the proposed fifth year would be practically spent by the candidate as "an unqualified assistant," that anomalous individual upon whom had descended the heaviest wrath of the General Medical Council in recent years. The speaker was strongly in favour of a prolonged period of genuine medical study, such as existed in Sweden and Norway; but he considered that a fifth year should be spent either in the wards of a clinical hospital or in a first-rate continental school, such as that of Vienna, Berlin, or Paris.—Dr. R. K. JOHNSTON thought the want of knowledge in the diagnosis and treatment of simple ailments on the part of senior students and junior practitioners arose through the students being anxious to see rare diseases, and this was due to the fact that the examiners expected them to have an accurate theoretical knowledge of rare diseases. Hospital physicians seldom lectured on the so-called simple ailments. Who, as a student, had ever heard a clinical lecture on biliousness?—Dr. Tobin, Dr. Doyle, Surgeon-Major Macnamara, and Dr. Savage also spoke.—The CHAIRMAN remarked on the importance of the question which Dr. Falkiner had brought under the notice of the Section, and the very interesting and varied opinions which had been elicited by the discussion. With respect to the great pressure on the students' time now complained of, he stated he used to go to hospital at 8 o'clock, attend medical and arts lectures all day, and often dissection in the evening, and many of his fellow students did the same. He was afraid students were not so industrious now as they were thirty years ago, or complaints would not be so numerous. Dr. Falkiner advocated attendance at a Poor-law dispensary as a suitable way of obtaining instruction in practical medicine and surgery, and pointed out how the class of diseases treated at dispensaries could not be properly studied in clinical hospitals. He (the Chairman) quite agreed that such institutions would be useful and desirable, and were at present difficult to obtain; but when it was remembered that there were some three-fourths of the members of the profession engaged in general practice, and that of these a great number held public or quasi-public appointments, and that many of them were quite unfit to act as teachers, he could not see that, under the present circumstances, it was desirable to accept certificates of study from

such a large class as must necessarily be included. We were sure of the instruction given in clinical hospitals, but could not be sure of what might be given at the dispensaries. The Chairman thought that while the instruction at dispensaries should be encouraged as an additional acquirement, it should not be allowed to be substituted for any portion of hospital clinical instruction. As to the suggestion that general pharmacy was not sufficiently studied, he was of opinion that it got quite enough of attention; it was no more the business of the medical practitioner to make tinctures and extracts than to make splints and to sharpen instruments. Pharmacy, like instrument making, was a trade attached to the practice of medicine. In conclusion, he sympathised with Dr. Falkiner's proposals, but was unable to see how they could be carried out.—Dr. FALKINER, in reply, held, in answer to the Chairman's objection to practitioners becoming teachers, that only those men who could teach would get pupils, as in the case of grinders and hospital teachers, and also differed from him as to the benefit of a knowledge of practical pharmacy to the practitioner, which Dr. Falkiner considered of extreme importance and value.

A meeting of the Section of Medicine was held on April 17th, the President, Dr. Finny, in the chair.

Hypnotism.—Dr. CRUISE read a paper on hypnotism. He commenced by describing the state of curiosity and doubt into which he had been thrown by extended reading on the subject, which led him ultimately to go to Nancy, and study there with Drs. Liébault and Bernheim. He related at some length what he had seen, and explained the favourable impression made upon him regarding hypnotism.—Dr. G. C. KINGSBURY asked that hypnotism should be accorded a trial in Ireland, on the ground that thoughtful physicians in France, Germany, Russia, Belgium, Holland, Austria, Spain, Italy, Greece, Denmark, Sweden, Norway, Switzerland, Portugal, and America had practically tested it, and declared it useful. He explained that when Charcot speaks of hypnotism he refers to certain manifestations of disease met with rarely amongst hysteroepileptics, whereas what is meant by hypnotism at Nancy is not a disease, but a method of treatment. Dr. Kingsbury showed that the principle underlying all the methods was the continued stimulation of one or more of the senses, with the constant suggestion of sleep. The further process of treatment was then detailed, and it was shown how the verbal suggestion of relief, of which it mainly consisted, could be greatly emphasised according to the nature of the case—e.g., by friction in rheumatism or neuralgia, by inducing the patient to inspire deeply in pleuritic affections, by ordering the patient to walk in functional paralysis, &c. Dr. Kingsbury held it to be justifiable to try hypnotism in all cases where a distinctly nervous element could be detected. All functional disorders might also be treated by means of hypnotic suggestion. He disclaimed any desire to replace ordinary methods of treatment, but thought that in many of the cases indicated hypnotism might be used in conjunction with drugs, whilst in some it might be tried alone. In midwifery, hypnotism seemed justifiable wherever any anæsthetic was thought necessary; but he advised anyone wishing to try it to hypnotise the patient several times beforehand, to familiarise her with the process, and also to ascertain what degree of anæthesia could be produced. In many cases of ovarian pain and menstrual derangement it might be useful. It seemed absurd to think that painful menstruation could be rendered painless, or that amenorrhœa or menorrhagia might be corrected by verbal suggestion during hypnosis made beforehand; nevertheless, such benefits were frequently seen to follow hypnotic treatment. The alienist was justified in trying hypnotism, though lunatics were very hard to affect, and moral ailments seemed to offer a wide field for the trial of hypnotism, including cases of inebriety, morphinomania, cocainomania, kleptomania, masturbation, &c. Dr. Kingsbury mentioned that before the introduction of chloroform, Braid, Liston, Velpeau, Broca, and others had performed many operations painlessly by means of hypnotic anæsthesia. Esdaile of Calcutta had also recorded over 200 cases of operation, including lithotomies, and the removal of immense tumours in elephantiasis performed in this way without pain. It is nowhere proposed now to supplant our ordinary anæsthetics by hypnotism, but Dr. Kingsbury declared that if he knew that a patient could be hypnotised deeply, so as to be completely anæsthetised, he would much prefer to employ hypnotism than chloroform for operative purposes. The dangers of hypnotism were shown to be grossly exaggerated. Dr. Kingsbury had failed to find any case where insanity could be shown to have been produced by hypnotism employed by a medical man. He thought it was time that the practice of hypnotism should be confined to the medical profession alone *by right*, but also maintained that scientists should be *allowed* to conduct hypnotic experiments for the elucidation of physiological and psychical problems. All that he asked was a careful and scientific testing of hypnotism.—Dr. CONOLLY NORMAN said that the extreme moderation of Dr. Cruise and Dr. Kingsbury would do as much service to hypnotism as the most extravagant claims of Voisin had done harm.—Dr. FITZGERALD made mention of two cases in which he obtained great benefit from hypnotism. In the first case, the patient had suffered from deafness and tinnitus, the latter of a very distressing character. The deafness was due to chronic catarrh of the middle ear of some years' standing, and though no improvement was gained as regards the hearing the tinnitus became greatly lessened, and at times disappeared. In the second case, that of a young man of a highly nervous temperament, who also suffered from tinnitus, great benefit followed the treatment.

Reviews and Notices of Books.

Cyclopædia of the Diseases of Children, Medical and Surgical. Edited by JOHN M. KEATING, M.D. Vol. IV. Philadelphia: J. B. Lippincott Co. London and Edinburgh: Young J. Pentland. 1890.

THIS volume worthily completes a great undertaking—a work which not only fills a distinct place in medical literature, but one which is sure to be regarded for a long time to come as the standard of reference upon diseases of childhood. The contents of this fourth volume are varied and important, and the articles are of as high quality as those to be found in the preceding sections. Diseases of the Ear are dealt with by Dr. Charles Burnett, the Professor of Otology of the Philadelphia Polyclinic, whilst the various affections of the Eye are discussed by Drs. Schweinitz, Turnbull, and Oliver; the last named treating in a very interesting manner the subject of Ophthalmoscopy. Of all these articles it may be said that they are systematic as well as clear, and that their writers, who speak with authority upon subjects which they have specially studied, have succeeded admirably in presenting the abundant facts at their disposal in an attractive and easily comprehensible manner. To the general practitioner the information here given upon aural and ocular affections will be as welcome as it is to the specialist. Several articles follow upon Hygiene, which might well have found a place at the commencement of the work. The first of these is a monograph of rare excellence and utility. It is written by the editor, Dr. Keating, in conjunction with Dr. J. K. Young, and its subject is Physical Development. We find in it a well-ordered sifting of statistical facts relating to the subjects of growth and development, whilst the physiological aspect of animal mechanics and the value of regulated exercise and gymnastic training are admirably see forth. The article is fully illustrated by reproductions of some of Mr. Muybridge's instructive photographs of the body in motion, and it constitutes a real contribution to knowledge. In the same section a brief but sufficient exposition of Massage is contributed by Dr. W. A. Edwards; an article on Prophylaxis of Disease (limited to contagious diseases), by Dr. Wellington Byers; a useful and practical essay upon School Hygiene, by Dr. D. F. Lincoln; and one on the Construction of Children's Hospitals, by Mr. Lindley Johnson. Topics of wider interest are those of Juvenile

Crime, discussed by Mr. Percy Keating, and of Medico-legal Testimony, by Dr. Jerome Walker.

The remainder of the volume is devoted to Diseases of the Nervous System. We can only refer to a few of the numerous articles which are comprised under this head, but we may say in general that the writers appear to have been well selected, and to have for the most part sustained the reputation of the work. The account of Multiple Cerebro-spinal Sclerosis, by Dr. W. B. Pritchard, reminds us that this affection is by no means limited to the adult, and that in the child the symptoms of tremor, staggering gait, increased reflexes, nystagmus, speech defects, and sometimes of strabismus and optic atrophy, constitute a well-defined group. The affection with which it is most likely to be confounded is Friedreich's ataxia, and, like that disorder, multiple sclerosis has a strong tendency to hereditary transmission. We note the stress laid upon traumatism as an etiological factor in this form of degeneration of the nerve centres, and believe that it is of great importance. As may be expected from its author's reputation, the article on Tubercular Meningitis by Dr. A. Jacobi is as scientific as it is practical; we only regret that it should be comparatively so brief. One remark the writer makes is worthy of considerable attention, for, true as it is, it has not been fully recognised. It is to the effect that many cases of this disease owe their origin to tuberculous disease of the bronchial glands, which may remain long latent, and may have been initiated by whooping-cough or measles in the earlier years of life. This fact, he thinks, should suffice to show the inutility of expectant treatment in "self-limited" diseases. The legacies left by measles are perhaps not fully appreciated; they may be overlooked because of the long period that elapses before they are made manifest. Dr. B. Sachs has an admirable article on Cerebral Hæmorrhage, Thrombosis, and Embolism; whilst the one that succeeds this—viz., that on Intra-cranial Tumours, by Dr. M. Allen Starr—is a model of excellence in arrangement and description. It is valuable, too, in view of cerebral localisation, and is based on a careful and extensive study of recorded cases. To Dr. Mary Putnam Jacobi has been allotted the description of Myelitis, Spinal Meningitis, and Hæmorrhage, the clinical parts of the article being those which will probably attract most attention. The writer gives a very complete account of meningo-myelitis following Pott's disease. Polio-myelitis anterior is described by Dr. Wharton Sinkler, who does good service in contrasting the features of true infantile paralysis with those of cerebral palsies. As to treatment, he points out that a vermifuge, by expelling lumbricoid worms, may considerably ameliorate paralysis at its onset. Leeches, counter-irritation, or ice to the spine are measures to be advised in the early stages, and ergot is recommended to be given internally. Electricity and massage are, of course, the chief measures for restoring muscular nutrition in the chronic stage. Friedreich's ataxia is concisely treated by Dr. Charles L. Dana, who thus summarises the "major essential symptoms" (p. 719): "(1) Ataxia, beginning in the lower limbs and extending to the arms and tongue; (2) peculiar rolling, ataxic gait, ataxia gradually involving the arms; (3) disturbances of speech; (4) talipes and spinal curvature; (5) gradual development of paraplegia; (6) loss of knee-jerk; (7) absence of cutaneous anæsthesia, of bladder troubles, of eye troubles except nystagmus, and of severe pains; (8) the development of the foregoing at about the time of puberty." The Operative Surgery of the Brain and Spinal Cord is dealt with by Dr. Charles Nancrede; it shows how great have been the advances in this line of treatment within recent years. The article on Chorea is contributed by Dr. B. Sachs, who, it may be remarked, found a satisfactory history of rheumatism in only eight out of seventy cases of chorea, and heart disease in only twelve cases. Of his own cases more than one-half arose from fright. The pathology of chorea is, he admits, still unknown; it would seem to be linked with a widespread nutritive and functional disturbance of the central nervous system, mostly of the cerebral centres, a disturbance which may own several causes. There is a very complete and careful article on Convulsions by Dr. Morris J. Lewis, and one on Epilepsy by Dr. Landor Carter Gray. The subject of Hysteria is treated by Dr. Charles K. Mills in a paper abounding in interesting facts; and, lastly, the subjects of Idiocy and Imbecility, by Dr. Edward Brush, and of Insanity, by Dr. E. C. Spitzka, are discussed with sufficient breadth for a general treatise of this class.

We have before expressed our sense of the service rendered to medical literature by the editor of this volume and the able physicians and surgeons whose services he has succeeded in securing; and we need only reiterate our conviction that the work as a whole is one which for erudition and practical utility has but few equals. Many of the articles which find a place in these volumes will rank as the best monographs on the subjects of which they treat, and it adds to the interest and importance of the work that its contributors include the names of many of the foremost living authorities on these topics in America, Canada, and England.

A Text-book of Chemical Physiology and Pathology. By W. D. HALLIBURTON, M.D., B.Sc., M.R.C.P., Professor of Physiology at King's College, London. London: Longmans, Green, & Co. 1891. Pp. 874. With 104 illustrations.

PROFESSOR HALLIBUTON may be congratulated upon having executed in a most meritorious manner an exceedingly difficult task. The field covered by the pages of the work before us is so extensive that it required most judicious arrangement and thorough grasp of the subject to enable a writer to present to his readers at once a comprehensive and yet not an encyclopædic book, and in the present instance both indications have been carried out. We are told that the title of "Chemical Physiology" has been preferred to the more familiar one of "Physiological Chemistry" because the aim of the book is rather to deal with the subjects from the point of view of their function in the body than from that of their chemical relationships one to another, and this line is steadily adhered to throughout. A careful perusal of Dr. Halliburton's chapters impresses the reader with the breadth of treatment and latitude of research which are therein represented. Not only do we find the purely physiological side of the matter clearly and concisely dealt with alike from the standpoint of human and comparative physiology, but some of the most interesting sections discuss the chemistry of the physiology of disease, giving most suggestive tables of analyses and statements concerning the various pathological processes which commonly fall under the notice of the clinical physician. The first part explains methods of research and analysis, including the usual chemical processes of analysis, alkalimetry, &c., the ultimate analysis of organic compounds, and gas analysis, whilst it closes with a careful description of the optical instruments employed in chemico-physiological investigations. In Part II. the chemical constituents of the organism are reviewed, and of the eight chapters therein contained those dealing with the proteids, the albuminoids, ferments, the processes of fermentation, with ptomaines and the leucomaines are especially important, and marshal together a large number of facts. The tissues and organs of the body are dealt with in Part III. While Chapter XIV. gives a most thorough exposition of the physiology of the cell, the following three chapters are occupied by the consideration

of the blood in health and disease. These review the blood both in vertebrates and invertebrates in a very complete manner, and lay largely under contribution Poulton's valuable papers upon the blood of Lepidoptera. But even more interesting are the sections dealing with blood in various morbid conditions, and here and elsewhere we are compelled to regret that the exigencies of space have prevented Professor Halliburton from elaborating his discussion of various points in chemical pathology. In treating of chlorosis, much stress is laid upon the absence of iron in the blood, and it is stated that "chlorosis also is that form of anæmia in which the administration of iron causes the best effects." In Chapter XVIII. lymph and allied fluids are considered; and here, again, the "clinical side" of the work exhibits conspicuous excellence, hæmorrhagic and chylous pleurisies, and other conditions usually only dealt with in monographs being noticed. The composition of pus cells is accurately given, myosin a commonly mentioned constituent being, according to Miescher and Dr. Halliburton, absent. Respiration and the chemical processes therein involved are fully and thoroughly described. That the highly important and interesting questions involved in the varying conditions of these processes in disease—e.g., fever—are relegated to small type was, we suppose, unavoidable. Our clinical and pathological manuals do not, however, deal with these matters at all fully, so that we regret the more that an author who shows himself so capable of grappling with such questions was compelled to curtail his remarks. The chemical nature of the tissue changes in myxœdema are well described, Dr. Halliburton having had unusual opportunities of studying this subject. Alimentation is considered in the twelve chapters which constitute Part IV., and its various complex chemico-physiological bearings are clearly reviewed, foodstuffs, dietaries, digestion, natural and artificial, being all in turn dwelt on. Professor Halliburton insists strongly upon the nutritional value of a food being estimated rather by its capacity for being assimilated than by its analytical value as a nitrogen supplier. Part V., which treats of excretion, is certainly one of the most useful in the book, and the sections dealing with urine in health and disease well epitomise the vast amount of literature and experiment which have grown about the subject. Chapter XLV., on the quantitative analysis of the constituents of normal and pathological urines, will be found both useful and reliable. General metabolism, which forms the subject of Part VI., has unfortunately had to be condensed into twenty-five pages, but the author manages in even so small a space to compress a good deal of matter. Speaking generally, we must regard the work as one of the utmost value to the physiologist, the research student, and the clinical observer. Those who desire light thrown upon some of the most obscure problems of pathology from the side of chemistry will find Dr. Halliburton's book a valuable help; while to those actually working either in the physiological or pathological laboratory, its aid will prove invaluable. The style is easy; the print, illustrations, and arrangement are excellent.

Reports from the Laboratory of the Royal College of Physicians, Edinburgh. Edited by J. BATTY TUKE, M.D., and D. NOËL PATON, M.D. Vol. III. Edinburgh and London: Young J. Pentland. 1891.

THESE annual reports of researches carried on at the pathological laboratory established by the Royal College of Physicians of Edinburgh have earned a conspicuous position in scientific literature. The variety and importance of the work they record show to how great extent the resources of such an institution may be utilised, and reflect credit on the public spirit of the college which initiated it. By the removal of Dr. Sims Woodhead to London the office of director of the laboratory has passed to Dr. Noël Paton, and he may be congratulated upon having gathered around him so many earnest scientific observers. The volume contains thirteen papers, the first being a very careful study of the pharmacology of Morphine and its derivatives, by Dr. Ralph Stockman and Mr. B. D. Dott. The similarity in action between morphine and its numerous allies is clearly shown; and amongst other new points it is proved that stimulation of the spinal cord is not a *sine quâ non* of the administration of the drug, but that it depends on the largeness of the dose, and also on the facility for direct action on this nerve centre. It is also shown that, when such direct action can be ensured at once, there is no antecedent depression. The authors consider that opium applied to the surface has very little, if any, action on the sensory nerves. Dr. Stockman also has a short paper on the Excretion of Balsams in the Urine, in which he proves that these drugs do not excite nephritis in the doses ordinarily administered. Dr. T. Arthur Helme has an interesting paper on the Physiology of the Uterus, and the Physiological Action of Drugs upon it, the essential point being the determination of the fact that the uterus undergoes regular and rhythmical contraction, and he has studied the influence thereon of cold, heat, ergot, and other measures. In an exhaustive paper on the Nature and Varieties of Leucocytes, Dr. G. Lovell Galland sustains the thesis that these structures are independent "organisms," their variations corresponding to different stages of life. The paper contains further an adequate discussion of the subject of "mitosis," which has done so much to widen our conceptions of cell-life. The literature of the subject is thoroughly utilised. The same writer contributes a paper on the Development of Adenoid Tissue, with special reference to the Tonsil and Thymus. His researches on the histology of these organs in the fœtus have led him to the conclusion that the ingrowth of epithelium constituting their earliest stage causes a condensation of the connective tissue, with cell proliferation and leucocyte infiltration. If these views be established, they will go far to harmonise pathological with physiological facts. Dr. Charles Kennedy contributes a paper on Cystic Disease of the Liver and Kidneys, based on a case where that condition prevailed extensively in both these organs. The author seems to incline to the view that the cysts are due to constriction of ducts and tubules by chronic inflammatory tissue; but he discusses other theories, which do not, however, associate the renal and hepatic changes so closely. Dr. Noël Paton and Mr. J. M. Balfour, M.B., give the results of their observations on a case of biliary fistula, upon the composition, flow, and physiological action of the bile in man. Amongst their conclusions are the demonstration that the quantity of bile secreted is less than is commonly supposed; that it is irregular, being highest about midday and lowest in the early morning hours, and that the amount of fluid imbibed has a marked effect on the flow. Amongst drugs they find salicylate of soda and calomel to actively influence the flow, and they confirm the fact that bile plays a considerable part in the absorption of fats. Altogether they say their studies point to the bile being regarded "rather as an excretion than as a secretion playing any essential part in digestion." Dr. Noël Paton also describes an experiment on the influence of muscular work on the proteid metabolism. Mr. J. C. Webster, B.A., M.B., contributes a paper on the Nerve-endings in the Labia Minora and Clitoris, with special reference to the pathology of pruritus vulvæ, the essential change in the latter being a fibrosis of the nerves, and of the end-bulbs and genital corpuscles. The writer, after alluding to the inefficacy of lotions &c., so frequently found in the treatment of this troublesome complaint, considers that excision of the affected skin alone can really be curative. Dr. Berry

Hart has a short paper upon the Anatomy and Mechanism of Early Abortion; Bacteriology is represented in a paper on Bacterio-Therapeutics by Drs. Woodhead and Cartwright Wood, and one on the Influence which the Process of Inflammation exerts on the course of Infection, as exemplified in Anthrax and Erysipelas, by Dr. Cartwright Wood and Mr. J. Maxwell Ross, A.M., M.B. The first of these papers is a suggestive research on the degree of immunity which may be conferred by the introduction of other toxines than that concerned in inducing the disease from which protection is sought. In this way it is hoped that the cells of the body may be stimulated to resist successfully the specific toxines, and a line of treatment, rather antidotal than antiseptic, be adopted for infectious disease.

Analytical Records.

BAILEY'S CONCENTRATED EXTRACT OF CLAMS.

(G. H. FULLER, TOWER CHAMBERS, MOORGATE-STREET, E.C.)

The liability of foods, and more particularly liquid foods, to become contaminated by the metal in which they are often preserved has been a matter of frequent comment in the columns of THE LANCET. True it is that in many instances the amount of metal is very small, and not likely to produce injury in the robust. But when such foods are intended for the use of invalids or infants, then absolute immunity from this likely source of mischief should surely and reasonably be insisted upon. We willingly assign space to a second notice of the above interesting preparation, as the vendor (acting on the remark which we made on the occasion of recording the results of our previous examination) has recently put up concentrated clam juice in stoneware jars. This is a step in the right direction, and one which we cordially welcome, and it seems a pity that other foods cannot be satisfactorily preserved in the same material. The results of our analysis substantially confirm those already reported. The clam juice was in excellent condition, and yielded negative reactions as regards the presence of injurious substances.

LIQUOR SALICYLICUS (SELLERS'), A COMBINATION OF THE SALICYLATES OF SODA AND QUININE WITH SALICIN.

(J. SELLERS, 57, FARRINGDON-ROAD, E.C.)

We find this to be a perfect solution of the salicylates of soda and quinine with the alkaloid salicin. Ether in an acid solution extracted the salicylic acid, and in an alkaline solution the quinine and salicin, all of which were recognised by well-known tests. It is needless to point out the probable value of a preparation like this in cases where the salicylates are indicated.

SYR. FERRI PERBROMIDI AND SYR. FERRI QUININÆ ET STRYCHNINÆ PERBROMATUM.

(BURGOYNE, BURBIDGES, & CO., 12 & 16, COLEMAN-STREET, E.C.)

Practitioners who may wish to prescribe ferric iron in combination with bromine, and if need be with strychnine and quinine hydro-bromates, will doubtless find these two preparations of value. Each fluid drachm of the syr. ferri perbrom. is said to contain five grains of the perbromide ($Fe Br_3$). Our analysis confirms this, as the figure actually gained was 4·94 grains. The syr. ferri quininæ et strychninæ contains in each fluid drachm 5 gr. of perbromide of iron, 1 gr. of quinine hydrobrom., and $\frac{1}{30}$ gr. of strychnine. On suitable treatment all these constituents were isolated and recognised. These results enable us to regard both preparations as trustworthy.

FLEXIBLE GELATINE CAPSULES &c.

(DUNCAN, FLOCKHART, & CO., EDINBURGH.)

The administration of nauseous as well as unstable drugs in the form of flexible and soluble gelatine capsules has found favour with many, and a well-known firm like Messrs. Duncan, Flockhart, and Co. are sure to devote great care to the preparation of medicaments of this kind. An illustration of this is afforded in the case of the Blaud's pill capsule, which of course should contain as far as is possible the iron in the proto or ferrous condition. On examining a capsule made by this firm, and said to contain the equivalent of three pills, we found that of the total amount of iron present 92 per cent. was in the form of proto-carbonate. Taking this as a typical case, we may regard the following preparations, which we have also received, as of an equally satisfactory nature. Compound iron capsules (Easton), each containing an amount equivalent to 60 minims of Easton's syrup. Capsules, each equivalent to half a teaspoonful of Gregory's powder. Cascara capsules, each equal to half a teaspoonful of the fluid extract of cascara sagrada. Compound syrup of hypophosphites, containing, in each fluid drachm, hypophosphite of iron $\frac{2}{3}$ gr., manganese $\frac{1}{4}$ gr., quinine $\frac{1}{4}$ gr., and strychnine $\frac{1}{10}$ gr. The presence of all the constituents in the last preparation was confirmed by qualitative analysis. The syrup is neutral to test paper, and is not disagreeable in taste.

TABLOIDS OF COMPRESSED WILLOW CHARCOAL.

(BURROUGHS, WELLCOME, AND CO., SNOW-HILL, E.C.)

In the now familiar form of drug known as tabloid, the above firm make a preparation of compressed pure willow charcoal, each containing five grains. The tabloids dissolve in the mouth with slight effervescence, and a taste resembling musk or red gum lozenge is experienced. The charcoal is evidently of a selected kind, and the microscope shows it to exist, when the tabloid is dissolved, in a finely divided state.

MEDICINE CACHETS.

Medicine cachets are intended to enclose solid and liquid medicines of a nauseous taste, as castor oil, copaiba, &c. They may be likened to a salt spoon, about two inches long, having a short flat handle. The medicament is placed in the bowl of the spoon and the handle wetted. It is then doubled over so as to form a tight lid to the bowl. The material, according to our own examination, is a perfectly pure form of starch. The cachets are accompanied with a metal ladle and mould.

COMPRESSED HOPS.

(WILKINSON, 37, CANNING-PLACE, LIVERPOOL.)

We have received an excellent and well-dried specimen of compressed hops from the above firm. Hops, it is well known, have been used in the form of bitters or tea as a stomachic, tonic, and sedative, and in the form of poultice for the relief of neuralgia. In a compressed state hop leaves offer a convenient and ready means of obtaining any of the above preparations.

GOUDRON DE GUYOT, LIQUOR CONCENTRÉE ET TITRÉE.

(L. FRERE, A. CHAMPIGNY ET CIE, 19, RUE JACOB, PARIS.)

Tar of Guyot is a brown liquid with a pleasant smell resembling rope yarn. It is alkaline to test paper, and the addition of acid causes separation of a dark-brown oil, which no doubt has its origin in crude tar. The well-known active antiseptics of tar have evidently been removed, and on this account it may be taken internally. Tar of Guyot has been used in certain diseases of the stomach, and it has been employed with good results, it is stated, in the treatment of bronchitis, asthma, and catarrh.

EXCELSIOR AUTOMATIC DISINFECTANT.

(WAGNER & GERSTLEY, 8, MOOR-LANE, E.C.)

This consists of a neat paper box, about half an inch deep, containing a solid crystalline substance, which emits a pleasant odour of a well-known coal distillation product. It is intended to be hung up on the wall of a room or closet. The substance is readily volatile, melts at 79·2° C., and boils at 217° C., figures which are in close accord with those yielded by pure naphthalene. While probably acting as a

mild antiseptic and disinfectant, this simple contrivance will also, it is said, be found useful in keeping away moths, mosquitos, &c.

FINE OLD HIGHLAND WHISKY, GALLEY BRAND.

(ANDREW MCNAB AND CO., GLASGOW AND LEITH.)

It is not difficult to pronounce this whisky a well-matured spirit, as it is exceptionally mellow to the taste. As will be seen from the results of analysis, the proportion of alcohol is what it should be; and in spite of a deeper colour than is usual, the quantity of residue is very small. Absolute alcohol, 42·55 per cent. by weight; 50·05 per cent. by volume, equal to proof spirit, 87·70 per cent.; residue, 0·06 per cent.; mineral matter, *nil*.

PETERMAN'S COCKROACH AND BEETLE FOOD.

(J. F. SHOREY, 57, FARRINGDON-ROAD, E.C.)

Many persons would be glad to know of a preparation which claims to be effectual in removing what are now very common pests of the kitchen and larder—the cockroach and beetle. We have examined this powder, and while we find it contains nothing of a nature injurious to children or pet animals, the analysis revealed the presence of a chemical compound which we know has been advocated for the above object. The powder has a faint, sickly smell, suggestive of bone meal, and it probably proceeds from a substance which serves to allure the vermin.

ANGLO-SWISS CONDENSED MILK.

(ANGLO-SWISS CONDENSED MILK COMPANY, CHAM, SWITZERLAND, 10, MARK-LANE, E.C.)

Of the samples submitted to us, one was prepared in Switzerland and the other in England. The former on analysis contained 7·70 per cent. of fat and 2·04 per cent. of mineral matter, and the latter 8·30 per cent. of fat and 1·96 per cent. of mineral matter. Both, therefore, represent original milk of good quality, 2·6 parts of which have been condensed into 1 part. There is evidently, we are glad to note, no abstraction of cream, and the addition of preservative other than cane sugar has not been resorted to. If, as is stated, there is much condensed milk in the market from which the greater portion of the cream has been skimmed off, it would be an advantage perhaps if respectable vendors were to label their tins with a guarantee in the form of a statement of the composition of the contents.

GERM BREAD AND BISCUITS.

(MESSRS. PAINE AND CO., ST. NEOTS.)

Wheat of a selected kind is evidently employed in the preparation of the samples of biscuits and bread which we have had occasion to examine. The bread contains a goodly proportion of nitrogenous principles which, according to the nitrogen found, amount to 10·00 per cent. calculated on the moist bread. The flavour of both is of special excellence, although that of the bread is somewhat sweet, resembling in this respect malt.

New Invention.

HEARSON'S PATENT BIOLOGICAL INCUBATOR.

ALL those to whose lot it has fallen to work with mercury regulators, especially where the gas supply is bad, will hail with pleasure any other method by means of which they are able to obtain a constant temperature for various kinds of bacteriological work, and will feel specially inclined to thank Messrs. Charles Hearson and Co., 235, Regent-street, London, W., for a most convenient thermostat, for which it is claimed, and with perfect justice, that it is suitable "for the cultivation of micro-organisms, for researches in embryology and histology, and in preparing and embedding objects for section cutting." This incubator differs materially from any that has yet been placed at the disposal of bacteriological workers, and although it is a modification of the egg incubator made by the same firm, a short description of its structure may be given in order that its advantages may be fully appreciated. Like the ordinary thermostat, it consists of a chamber surrounded by a copper water jacket; outside the water jacket is a covering of one inch pine, which thus takes the place of the ordinary felt; this does not accumulate dust and is much more readily kept clean. The chamber is closed with an inner glass door and an outer wooden one. The regulation of the temperature is effected by the expansion and contraction of a few drops of liquid (having a boiling point at or near that at which the temperature is to be maintained) contained in a hermetically sealed metal capsule. As this expands a weighted lever is raised and the gas is cut off by an ingenious valve arrangement; as the temperature falls the liquid again condenses, the lever is allowed to fall, more gas enters, and the temperature is again brought up. By adjusting a sliding weight on this lever, the boiling point may be so altered that a range of about eight degrees is obtainable; but once adjusted, the apparatus is so delicate that whatever the pressure of gas in the mains may be, the temperature may be kept so constant that it will not vary more than half a degree (although the makers say a degree and a half) for weeks together. A more important improvement, however, is a paraffin lamp regulator which can be adjusted to the same chamber; this, to those who are working in the country or abroad, will prove a very great boon, as it is, so far as we know, the only practically perfect paraffin lamp regulator now in the market. By means of a very simple arrangement of air-valves worked by the volatile fluid in the capsule a constant temperature is obtained, so that one of the main difficulties in connexion with research in parts of India and other countries where no gas can be obtained is removed. One great advantage of this arrangement is that, as the expansion of the fluid in the capsule is owing to its boiling, which takes place at a definite temperature, the lever is only acted upon when the critical temperature is reached, no sensible effect being produced at even a single degree below that at which the capsule is to act; so that any deviations are dependent entirely on barometrical variations, and by observing the reading of the barometer from time to time, and slightly altering the sliding weight on the lever rod, even this variation can be reduced to a minimum. It is claimed that by the use of cold water, ice, and one of these regulators, the air in a biological incubator can be made to act at any temperature from 70° to about 300° F. (21° to 150° C.). The makers say, and those who have worked with this apparatus fully corroborate their statements, "that in actual practice it is found that the temperature can be maintained uniform within half a degree without readjustment of any part for months together, and this, too, in defiance of great changes of gas pressure, and of air temperature in the room in which the apparatus is working." This apparatus is in every way much in advance of anything made either in France or Germany, and it gives us great pleasure to bring it under the notice of our readers.

FIRING HORSES.—At a meeting of the Council of the Animals' Institute, Mr Atkinson pointed out that the custom of firing horses was terribly abused by ignorant persons being permitted to perform this painful operation at their own discretion. Popular opinion erroneously imagines that it is not only a cure, but also a preventive, for all forms of lameness. If such a remedy is necessary, it should be performed by a qualified person.

THE LANCET.

LONDON: SATURDAY, MAY 23, 1891.

THE meeting of the General Medical Council somehow or other becomes more and more a matter of interest to the profession. Its powers are sadly too limited. It cannot stay epidemics; it cannot suppress quackery; it cannot solve the problem of a Teaching University for London; it cannot adequately punish those who degrade medical practice and its methods. Yet for all that it is a body whose proceedings excite a general interest in the profession, beyond those of any of the leading constituent bodies, of whose representatives it is predominantly composed. For one thing it is an open body, and its proceedings are carried on in the light of day and under definite state sanctions. For another, it is in touch as none of the individual bodies are with the body of the profession. How unreasonable it seems that while representatives of the profession sit in the Medical Council, and confessedly without any disastrous consequences to its education or interests, the Council of the College of Surgeons, and other corporations for that matter, exclude their members from all authority and representation. The principle of direct representation cannot stop where it is. Having gained a footing in the General Medical Council, in the Convocation of the Universities, and in the General Councils of the Scottish Universities, it is bound to triumph over all narrowness in the individual bodies.

We have not yet been favoured with a programme of the proceedings of the Council, but there are materials enough in the proceedings of the last Executive Committee and of the last meeting of the Council to enable us to forecast pretty closely, with the help of a little imagination, the nature of the subjects which will most engage the attention of the Council. The first business, after the reading of the minutes, will be the election of a President. The ninth clause of the Act of 1886 requires that the president shall be chosen from the members of the Council. There is much speculation as to the member of the Council on whom this honour will fall. All are agreed that it will not be easy to find a man with so many fitting qualities as were united in the late President, whose genial face and rule will be much missed. This election over, the most important business of the Council at its May meeting will be the discussion and determination of questions in medical education, and two or three circumstances conspire to raise several such questions at the approaching meeting. The first of these is an uncomplimentary communication from the Secretary of State for War, announcing that he has before him a report from the Director-General of the Medical Staff "of the manifest deficiency in orthography prevalent amongst the young medical officers of the army," and adding that "this deficiency has for some time past so forced itself on the notice of the military medical authorities, that a special clause has been introduced into the Regulations for admission to the Army Medical Staff, to the effect that the Secretary of State reserves to himself the power of making bad spelling a cause of rejection." This is a humiliating communication for the Medical Council and for the medical profession, and perhaps throws some light on the reluctance of the authorities to do justice to the claims of medical officers. It is the more remarkable that in other respects, and in the examinations for appointments, fewer deficiencies are found than used to be found. The Medical Council has not been unaware of the fact so candidly pointed out by the Secretary of State for War. On the contrary, by the late President, by the Education Committee, and by the Inspectors appointed under the Act of 1886, the fault has been well noted. If any blame attaches to the Council it is for not having taken more energetic measures to identify the bodies whose examinations in preliminary subjects are so lax, and to visit them with proper punishment. It is understood that the matter is under the consideration of the Education Committee and will have the serious attention of the Council. It may well be that members of other branches of the public service are not in a position to throw stones at the members of the Medical Department in this matter. But that is poor satisfaction, and does not exonerate the Medical Council from the duty of more sternly refusing to control bodies which examine badly in preliminary education. We have repeatedly pointed out that the present standard of such education is far too low. Another circumstance which tends to make the approaching meeting and its educational discussions more important is the fact that the term of medical education has been extended by the Council to five years, and that the right use of the fifth year has to be more or less indicated by the Council. The Council has clearly accompanied its recommendation of the addition of a fifth year with the stipulation that the last year shall be used in the acquisition of practical and clinical knowledge. There is plenty of room for discussion as to the claims of any special clinical work, or kind of clinical work, to particular attention in this year. The great question of practical teaching in midwifery will be again raised. It was left in a very unsatisfactory position in November, on the understanding that it should be reverted to at the May meeting. It may well be that the representatives of other important groups of disease, such as those of the eye, may make themselves heard in the Council in reference to the uses of the fifth year. But the great duty of the Council is to complete its requirements of all such knowledge as is requisite for the efficient discharge of the every-day duties of the general practitioner. It is conceivable that the zeal of the Council in this matter may be quickened by a reminder that the Lord President is a factor to be reckoned with in urgent questions of medical education.

Important, and on the whole satisfactory, information is likely to be forthcoming on the attitude of the Local Government Boards of England and Ireland, and the Board of Supervision in Scotland, with reference to the desire of the Medical Council that the sanitary authorities in different parts should help candidates for Sanitary diplomas in gaining practical knowledge of the duties of a medical officer of health. One subject of no small moment to the profession in the metropolitan area is the state of the law

with reference to the application of fines for violation of the Medical Acts. Under the Metropolitan Police Acts such fines are appropriated for police purposes. The consequence is that prosecutions are practically abandoned in this area. Dr. GLOVER has given notice of a motion on this subject to urge the Government to promote such an alteration of the law as was obviously contemplated by the Medical Act of 1858. Several cases of discipline may be brought before the Council, but its primary duty on this occasion is with reference to educational matters.

THE term "functional," as applied to certain forms of obscure nervous disorder, has perhaps a few advantages over its synonym "hysterical." The latter word by its etymology commits the user more or less, according to the individual interpretation of it, to a certain view as to the etiology of the condition to which the term is applied. It may be said that this is not so, that the word has been used to designate so many and such varied conditions that its primary significance has been lost sight of; yet it will scarcely be denied that to use such a word as descriptive of conditions which are found in male patients—much less frequently, it is true, than in female—is at least highly undesirable. The term functional, however, has about it a delightful vagueness. It explains nothing, it has no arbitrary meaning, and it expresses nothing in particular. If it be said that the term is only applied to conditions in which disturbance of function is manifested, then it must be granted that the term is applicable to every diseased condition which we know, for it will not be denied that all diseased conditions manifest themselves by perverted or disturbed function. It may be further asserted that the distinction between so-called functional and other conditions lies in this, that the latter have underlying them some morbid condition of organs. This we are prepared to admit, with the qualification that in some at least of what are well-recognised forms of disease there is no general consensus of opinion as to what the morbid condition in the organs is. On the other hand, can it be positively asserted that there is no anatomical lesion underlying the phenomena of functional paralysis? It is only of disease that kills that the morbid anatomy is known. No doubt cases of so-called functional paralysis do die, but a further examination as a rule leads only to a change in the original diagnosis, and even if no lesion be discovered, imperfection of methods of examination could reasonably be urged as the explanation of this. It will be seen, then, that the question narrows itself down to this, Can we draw a definite line of distinction between what is known as functional paralysis and what everyone recognises as true organic disease?

In deciding whether a given case is one of functional paralysis it is evident that the personal equation of the observer must be a very large factor. The diagnosis in such a case is usually arrived at by a process of exclusion, and it is evident that much will depend upon the knowledge and experience of the investigator, and that the greater such knowledge and experience, the rarer will the diagnosis be made. In his presidential address to the Neurological Society of London, bearing the significant title, "The Simulation of Hysteria by Organic Disease," Dr. BUZZARD drew attention to a large and important class of cases in which the diagnosis is far from easy, and in which that of "hysterical" or "functional" is too often made. The class referred to is that of disseminated sclerosis, and it was pointed out how very hysterical (no other word is available) such patients frequently are, although the organic background of the picture is plainly visible if it is carefully looked for. And if, as no doubt will be the case, wider recognition is granted to this class of cases, the ranks of the so-called hysterical will be appreciably thinned, and a large and important addition made to those of the sufferers from organic disease.

These being excluded, however, a large group of cases still remains to which the term "functional" seems to be the only one applicable. The prominent symptoms which may be enumerated are contraction of the visual fields, hemianæsthesia, with, it may be, motor weakness on one side, or in both lower limbs, and often associated with a peculiarity of manner which is difficult to describe, but is of great diagnostic significance. As those cases almost invariably recover perfectly, the question which remains for discussion is, On what does the disturbance of function which is present depend? Is there some underlying morbid condition which might be recognisable if an opportunity occurred for examination, or which might elude our present methods of investigation, or is the condition due to voluntary deception on the part of the patient? No one, we think, will deny that this problem is one of the most difficult and intricate in the whole field of medicine, and it is one on which we can only expect to throw a small ray of light by contrasting the two sides of the question. On the one hand, the manner of the patients is highly suggestive of deception, and in some of the cases simulation does undoubtedly play a part; but, on the other, against the view that it is all voluntary, the very fact that the cases can be so definitely grouped, and that the symptoms present such a very close agreement, seems to contend strongly. If there were analogous conditions where the idea of malingering was out of the question, the existence of such would naturally favour the view that the symptoms were not due to voluntary deception; but while the phenomena of hypnotism naturally suggest themselves, they can hardly in our present state of ignorance as to their causation and their underlying conditions be cited in this relation. And although post-epileptic paralysis may present some suggestive analogy to the conditions which we are discussing, and although there can be no doubt as to its reality, it cannot be urged that the resemblance in the conditions is at all close. We cannot, in short, as yet hope to give any definite answer to the question; but we can at least be on our guard against too readily, and without sufficient grounds, diagnosing hysteria, and falling into the lamentable error of including, among the functional or hysterical, patients in whom there exists the slightest definite sign of organic disease. And even supposing that we may be able to exclude every known form of organic disease, we must recognise that our knowledge of disease is as yet but in its infancy, and that in applying the term "functional" we are not making a diagnosis, but merely a convenient and temporary classification. As time goes on and our knowledge extends we may be

quite sure, to quote from the address already referred to, that "the figure of hysteria will shrink in proportion as the various forms of organic disease acquire greater solidity and sharper outline."

SINCE the recent remarkable epidemics of lead-poisoning in certain districts of England, the nature of the action of water upon lead has very properly received a considerable amount of attention, both from medical officers of health and investigating chemists. One of the ablest of the records of experimental inquiry that have appeared from time to time as to the cause and mode of this action of water on lead, has recently come under our notice.[1] In this work Dr. GARRETT gives a very interesting account *in extenso* of experiments in which the action of distilled water, and water from melting ice, rain water, the water as supplied to Mirfield, Yorkshire, by the Huddersfield Corporation, the water supplying Okehampton in Devon, and the water of the New River Company was closely observed. It has been generally held that when distilled water acts upon lead, it is the oxygen in solution which is concerned in the production of a lead compound consisting of hydrate and oxide in molecular proportion, and that this compound is more or less soluble in the water according to the nature of its constituents. Although the action is doubtless due to oxygen, the author finds that it is not direct oxidation that takes place, but oxidation through the agency of an intermediate body which is present in the water. Thus he found that when recently boiled water was used considerable action was seen to take place, even when the temperature was maintained at boiling point. As there could be no dissolved oxygen under these circumstances, the author infers that the lead derived its oxygen from another source, and that this source is most probably a nitrate, a body which is known to act as an oxygen carrier in many familiar operations. Even distilled water contains sufficient nitrate to account for its action upon lead. The occurrence of nitrate in distilled water may possibly be due to the breaking up of nitrogenous matter, which, undergoing oxidation, yields nitrate in the distillate in the form of ammonium salt. In one experiment, for example, where distilled water of a slightly acid reaction was used a faint ammoniacal odour developed after a time, and the reaction changed to alkaline from the presence of lead oxyhydrate. It is quite conceivable that the nitrate undergoes reduction to nitrite, and that the lead oxide formed reacts with the ammonium nitrite so reduced, to form hydrate of ammonia and nitrite of lead—a theory which is supported by the fact that in many of the experiments the pieces of lead were found coated with nitrite. The author, however, does not appear to have determined whether the lead used was pure. He merely states that the lead employed in the experiments was a piece of new one-inch service pipe. Now were the lead associated with but a small proportion of other metal the action might reasonably be assigned to a different cause; for it is well known that dissimilar metals in contact with one another set up galvanic action, and a notable quantity of metal may thus become oxidised and not improbably dissolved. In the largely employed method for the determination of nitrates in water, for example, chemists take advantage of the action of the copper-zinc couple in bringing about conversion of the nitrates into nitrites, and finally ammonia. However this may be, the lead compound first produced is unquestionably oxyhydrate, and it only remains to determine how it is that certain waters are active in producing this compound, while other waters apparently possess little or no power to act. Lead oxyhydrate, the author finds, is distinctly more soluble in water containing common mineral constituents, such as the salts of ammonium, sodium, calcium and magnesium, existing as carbonates, chlorides, nitrates, and sulphates. It dissolves to the extent of $\frac{1}{2}$ gr. per gallon in New River water, $\frac{3}{4}$ gr. in Huddersfield water; and while cold distilled water takes up $\frac{1}{10}$ gr. per gallon, boiling water dissolves only $\frac{1}{100}$ gr. Sulphate of lime was found to retard the oxidation, although it facilitates the rate of solution. Common salt tends to increase the amount of lead compound produced. Sodium phosphate in an alkaline water protects the lead from action as soon as a film of phosphate of lead is formed; but phosphate in an acid solution failed to protect the lead, and the water eventually became alkaline from formation of oxyhydrate. In the same way alkaline silicate prevented the process of oxidation—a result which the author attributes to the carbonate rather than the silicate of sodium, inasmuch as water to which silicate of soda made distinctly acid had been added acted in a marked way upon lead. Sulphuric, nitric, hydrochloric, and acetic acids, as might be expected, act readily on lead, neutralising the oxyhydrate first formed, the solution eventually becoming alkaline in reaction. Alkalies in the form of carbonate of ammonia and soda effectually check the progress of lead oxidation in consequence of the formation of a protective coat of basic carbonate of lead. Carbonic acid unites with oxyhydrate to form carbonate of lead, which is soluble in excess of the gas. Our own experiments have shown that when carbonic acid gas is passed through water containing lead a considerable quantity of metal is taken up, and basic carbonate of lead is deposited on boiling. The author appears to think that contamination from this cause is not likely, as the amount of carbonic acid gas existing in ordinary waters, generally associated as it is with lime, is as a rule so small as to be nullified by the oxyhydrate of lead in the production of basic and insoluble carbonate. But although carbonic acid gas when present in water occurs in general along with much chalk, which no doubt obviates metallic contamination, we have met with certain waters containing only three to four grains of solid matter, and yet a large proportion of free carbonic acid gas. In fact, it was noticed that in one instance the water after passing through a zinc-lined pipe was found to contain a notable quantity of zinc as carbonate, and on boiling off the carbonic acid the zinc salt was precipitated.

Lastly, very interesting comparative results are given of experiments made with the water supply of Huddersfield, Okehampton in Devon, and the New River Company. The Huddersfield and Okehampton waters were both acid to cochineal, very soft, and like rain water (which acts strongly on lead), they contained nitrate of ammonium, and but very little fixed mineral matter. Both waters acted

[1] The Action of Water on Lead. By John Henry Garrett, M.D. Pp. 116. London: H. K. Lewis, 136, Gower-street, W.C. 1891.

markedly on lead piping. The water of the New River Company differs very essentially from the two just mentioned in containing a comparatively high proportion of mineral constituent, chiefly of course carbonate and sulphate of lime. It has practically no solvent action upon lead, action being prevented doubtless by the presence of carbonate. Moreover, when one part of New River water (containing 13 gr. of carbonate of lime per gallon) was mixed with twenty parts of Huddersfield water (Mirfield) it was found to be more than enough to prevent action upon lead. In the face of a result like this it seems highly probable that if a water could be made to take up a sufficient quantity of carbonate of lime by a suitable and convenient process, the contamination of a water-supply with lead would be obviated. On the other hand, good results have been stated to follow on the use of flints, but Dr. GARRETT thinks that such results were more likely due to the neutralisation of the water by the alkaline carbonate contained in the flints. The author is strongly inclined to regard the acid which occurs in lead-dissolving waters as of an inorganic rather than organic nature, and in view of the fact that the waters in question contained nitrate, he is of opinion that it is nitric acid. The idea of the existence of the so-called peaty acids, humic and ulmic, he rejects, although many chemists have attributed the action of waters, especially those which have their origin in peaty districts, to these bodies. For further information of an equally interesting nature we commend our readers to a perusal of this instructive record of experiments, which have for their aim so desirable an object as the removal of what has threatened to be a great danger to the health of the community.

THE history of inhalations in the treatment of phthisis is not an encouraging one. They have been widely employed and hailed as the most rational and effective mode of assailing the disease at its seat. But the results of this method of medication have not been commensurate with the expectations excited by it, and we imagine that of late it has been gradually falling into disfavour and disuse. Several potent objections have been urged against the method. First, it has been denied that the various antiseptic and germicide agents applied by inhalation succeed even in reaching the seat of the disease—viz, the submucous tissue of the bronchial mucous membrane,—but are arrested often in the pharynx, oftener still in the larynx. Then it has been shown that, even assuming that the medicated atmosphere produced by one of the ordinary inhalers really reaches the seat of the disease, its impregnation with carbolic acid, creosote, thymol, or other such agent, is so exceedingly feeble as to leave no solid ground for anticipating serious benefit from its use. Further, many authorities urge with much force that if the phthisical patient be taught to rely upon inhalations the inevitable result will be a life of indoor invalidism and constant tinkering with his inhalers—a mode of existence sure to effect an amount of mischief more than sufficient to counterbalance the problematical advantages of inhalation.

There is much weight in the above objections, and until they can be satisfactorily met the place of inhalations in the therapeutics of phthisis cannot be an important one. Professor GERMAIN-SÉE, in a recent paper presented to the French Academy of Medicine, has sought to overcome the first of the objections to which we have made allusion—viz., the failure of the medicated atmosphere to reach the actual seat of the disease. He recalls the researches made at various times into the action of creasote upon tuberculosis. This drug has had a remarkable and somewhat chequered career. Discovered in 1832 by REICHENBACH, its true composition was first made known in 1853 by GORUP-BESANEZ, who showed that it consisted mainly of two substances—gaïacol and créosol. It was in 1877 that BOUCHARD and GIMBERT conceived the idea of its possible utility in phthisis, and made trial of it both *per primam viam* and hypodermically. Later, FRAENZEL and SOMMERBRODT in Germany made extensive trial of creasote, and reported benefit from its use. GUTTMANN, in his researches in the year 1889, found that the saturation of the system with creasote arrested the development of the bacilli, and suggested that the best means of bringing the system thoroughly under the influence of the drug would be to submit the patient to an atmosphere saturated with creasote under pressure. This is also the method recommended by Professor GERMAIN-SÉE. He describes it as follows: "The patient is shut up in a metal chamber, hermetically closed, and compressed air, passed through creasote and eucalyptol, is made to enter slowly. The air in passing through these liquids is saturated, and arrives charged with a large quantity of these medicaments. The pressure must be slowly increased, and should not exceed a half-atmosphere. The speed of delivery of the air saturated with the medicated vapours is from fifteen to twenty cubic metres per hour for a space of five cubic metres of capacity. The length of time the patient remains in the chamber is usually two hours, sometimes three or more, and no inconvenience ensues as the result of this procedure. The inhalations are made daily or more frequently."

Professor GERMAIN-SÉE has tried this method in twelve cases, of which one was a case of apical bronchitis, a second was a case of fetid bronchitis, and the remaining ten were genuine cases of tubercular phthisis, all of which, with one exception, had arrived at the stage of softening. The results obtained would appear to be surprising, a marked amelioration being in most cases observable, not only in the amount and character of the expectoration, but in the general constitutional condition, and in some cases, though not in all, a corresponding improvement in the physical signs. Contrary to what might seem probable, hæmoptysis was not only not excited, but seemed controlled by this mode of treatment, and the appetite and digestion were improved rather than otherwise. Hectic fever was also diminished. Naturally, the least improvement was manifested in the physical signs, but Professor GERMAIN-SÉE is inclined to hope that by this new method the disease, if not cured, may be at least arrested, and further progress prevented. Benefit was obtained in some cases in a fortnight, in others the treatment was kept up for three months. Very great benefit was obtained in some cases of scrofulous enlargement of the cervical glands.

At the present time it is hardly necessary to emphasise the necessity for extreme caution in admitting the claims of any new alleged remedy for tuberculosis, and the evidence before us in the present case, although interesting, falls immeasur-

ably short of demonstration. Further trials will no doubt be made, and their results will be awaited with attention. One benefit, somewhat negative in character, may even now be derived from Professor GERMAIN-SÉE'S researches—viz., the realisation of the utter futility of the methods of inhalation so long adopted, and the uselessness of the inhalers now commonly employed. If inhalation is ever to become a valuable agent in therapeutics, it will probably be by the adoption of some plan analogous to that sketched above, and according to our present knowledge the most hopeful medicament with which to experiment would seem to be creasote.

Annotations.

"Ne quid nimis."

CLINICAL INSTRUCTION IN INFECTIOUS DISEASES IN LONDON.

THANKS to the energy of the Medical Council and the Royal College of Physicians, the metropolitan asylums hospitals have now been opened for clinical instruction in infectious diseases. This makes an enormous addition to the clinical field of the London schools. We have before us a poster headed "Medical Instruction at Fever Hospitals." This has been sent to the deans of all the medical schools. A two months' course has been announced, to be commenced on May 4th, by Dr. Collie at the Eastern Hospital, Mr. R. M. Bruce at the Western Hospital, and Dr. J. MacCombie at the South-Eastern Hospital. It remains to be seen now how far London students will do their part in this matter. In Edinburgh, Dr. Littlejohn lately said in a letter to THE LANCET, nearly 200 students a year receive such instruction. In Glasgow they have the same success. In both towns it is noted that it is a most exceptional thing for students to be attacked by the fevers they study. In the Metropolitan Asylums a carefully drawn set of rules is likely to secure a similar immunity. But, in any case, the diseases have to be studied. We gather that, so far, the number availing themselves of these arrangements is rather disappointing. This probably arises from a want of familiarity with the arrangements, from distance, &c. But these difficulties must be overcome, or the regulations of the Medical Council will turn out to be a dead letter, and errors of diagnosis under the Notification Acts will arise to discredit their authors. The authorities of the Local Government Board and the managers of the Metropolitan Asylums Board have shown great earnestness in this matter, and it will be a matter of regret if they are disappointed by a want of response on the part of medical students and teachers.

THE INTERNATIONAL CONGRESS OF HYGIENE

WE have to congratulate the organisers of the International Congress of Hygiene on the progress they have made. This week the press at large has noticed at length the subjects that the various sections are to discuss, and given the names of the very eminent scientific authorities who compose the managing committees of these numerous subdivisions of the Congress. There is no doubt that the Congress has received widespread support. It will be a magnificent gathering and a unique opportunity of achieving real practical work. The Congress will have the power to shape the sanitary legislation of many countries, and we trust that it will exercise this unquestionable influence to the best possible advantage. The organisers have been well inspired in publishing, in pamphlet form, the entire programme of the proceedings, as the numerous circulars issued by the various sections were becoming somewhat unwieldy. It is unfortunate that the Congress cannot meet in a single building, but as there are to be ten and probably eleven, sections or divisions debating simultaneously, we understand that it would be most difficult t find premises large enough for so many, as it were, separate congresses to sit under one roof. From abroad most encouraging reports have been already received. The Governments of Denmark, Italy, France, Holland, Turkey Switzerland, the United States, Hong Kong, New Zealand, and Victoria have appointed official delegates, and their example is sure to be followed by many other Governments. Certainly, thirty, and perhaps forty, nationalities will be represented, and our colonies will be in great force. The different Governments of India are taking energetic measures to secure a good hearing in urging the claims of India to a large share in the benefits of sanitary reform. In this respect we would suggest that some reports on the condition of native labour in the cotton and other factories of India that compete with Lancashire would be most appropriate at the present moment. This is a question that the Industrial Hygiene Section should take in hand, for the advocates of factory legislature in India are greatly in need of the moral support such a congress could give, and give most effectually.

DEATH AFTER A DOSE OF SALOL.

SALOL is usually considered a tolerably innocuous drug, but there are not wanting clinical observations which tend to show that, under certain circumstances at least, its use may be followed by dire results. Thus a case was some time ago reported by Aufrecht and Behm in which death followed its use in acute endocarditis, and more recently Dr. Chlapowski has published in a Bohemian medical journal an account of a case in which a similar fatal result followed a fifteen-grain dose ordered to a patient who was suffering from severe gastric symptoms, and who was being examined by Ewald's method. After taking the salol the patient became restless and unconscious, the pupils dilated, the pulse became irregular, there was constant vomiting, and the urine became dark, and contained salicylic acid. Death occurred twelve days later. At the necropsy there were found gastritis and hæmorrhagic enteritis, a gastric ulcer cicatrised at the cardiac end, chronic endometritis, and a cyst of the ovary. No doubt was entertained that the salol had caused the symptoms of poisoning.

MEASURES AGAINST SMALL-POX, ANCIENT AND MODERN.

THE *Pall Mall Gazette* quotes the following from a newspaper published in Minnesota, U.S.A., in February of the present year:—"Prairie du Chien, Wis., Feb. 15th.—P—— D—— died to-day in the pest-house from small-pox and pneumonia. He was sent to the house, which has been established owing to the epidemic, to look after a small-pox patient, and from him contracted the disease. In his delirium he escaped and caused a panic by running through the street, everyone trying to get out of the way of the dreaded infection. Finally, the town marshal, with a gun, started in pursuit, and, the man refusing to halt, shot him in the leg. He was then taken back to the pest-house, where he died to-day. There are no new cases of small-pox." Thus it is clearly an offence—punishable, if need be, by death—to spread the small-pox infection in Minnesota. But there was a time when it was obviously an offence in this country to contract small-pox at all, and our contemporary reminds us of an "old-time punishment" which is to be found in the accounts of a Huntingdonshire village constable of

1710: "Paid Thomas Hawkins fur whipping 2 persons yt had small-pox, 8*d*." It has sometimes been suggested that, instead of compulsory vaccination, some punishment should attach to the responsible head of a family in which small-pox occurs; but we imagine that when small-pox again becomes epidemic most of the now boasting defaulters will make a rush to the vaccination stations, and hence it is hardly worth while to re-enact whipping by constables. But it may be convenient for Leicester to know that under an Act of the seventh year of King George I, 1721, it was enacted that in case an infected person quarantined in the pest-house "shall actually escape out of such ..... house, lazaret, or other place, where he, or she, shall be so placed for performance of quarantine, before he or she shall have fully performed the same, he or she shall be adjudged Guilty of Felony, and shall suffer Death as a Felon without benefit of Clergy." It has always been a matter of wonder to us how Leicester will manage, if small-pox should become somewhat prevalent, to keep people detained under their vaunted system of "quarantine" in the old wooden shed which they devote to that purpose; but, if this Act of George I. be not repealed, all difficulty may disappear, unless indeed town authorities should prefer the New World method of last February, and thus generously waive the matter of "benefit of clergy."

DOES ERROR OF DIAGNOSIS DISENTITLE TO FEES FOR NOTIFICATION?

THE practical Scottish mind is exercising itself characteristically on questions arising out of the administration of the Infectious Diseases (Notification) Act. At Partick measles seems to have been included in the diseases to be notified, but Dr. Barras, the medical officer of health, does not advise the continuance of this inclusion, as very few cases are sent to hospital; and it is well known that the infection operates before the disease is pronounced. A nicer question has been raised and settled. The notifier, being a medical man, is not supposed to be very fallible in his diagnosis. But mistakes will happen even in highly trained hands. And they have so happened at Govan, Partick, and other places. The town clerk of Govan has given it as his opinion that those practitioners whose diagnosis turns out to be wrong are not entitled to receive the fees payable under this Act. This point seems to us to admit of argument. It surely cannot be maintained that infallibility of judgment in a medical man is essential to constitute a claim to remuneration. Where there is gross carelessness or want of skill the case is different, but where the point is a nice one and the medical man is careful, we think he is entitled to his fee.

OPERATION FOR FRACTURED SPINE.

AT a recent meeting of the Glasgow Medico-Chirurgical Society, an account was given by Mr. D. N. Knox of a case of much interest which had been under his care at the Royal Infirmary. The patient was a pit boy, aged thirteen, who was admitted on account of a severe injury to his back which he had sustained through a cage falling upon him. His back was much bruised, he complained of pains of a cramp-like character in his legs, and he could only rest when laid on his side with his legs drawn up. There was a very distinct projection of the eleventh dorsal spine, evidently the result of displacement of the corresponding vertebra. There was complete loss of ability to move the legs the morning after admission, and loss of sensation, but the patient passed his urine voluntarily. An operation was undertaken thirty-six hours after the injury, and it was found that the body of the eleventh dorsal vertebra was fractured, that it was displaced backwards and its spine rotated to the right, and that the upper articular processes were also fractured and displaced. After the theca had been exposed by sawing through the laminæ of the tenth dorsal vertebra the spine was extended, and the displaced vertebra restored to its position. The spinal cavity was carefully cleaned, and, on account of the large amount of bruising, the wound was stuffed with gauze, and afterwards allowed to granulate. The patient rallied well, and on the day after the operation had completely regained sensibility in his legs. The progress as regards motor power was very slow but steady, and at the time the paper was read the patient was able to take a few steps without support. The chief difficulties that had to be contended with after operation were apparently the wasting of muscles, with the proneness of the joints to become fixed, and massage and galvanism were employed with the view of obviating these. There was also difficulty at first in keeping up a good position of the back, the tendency to projection when he raised himself from the recumbent posture being impossible to counteract. Mr. Knox is to be congratulated on his success in dealing with one of a class of cases which have hitherto not been found the most favourable for operation, and it is to be hoped that the complete restoration of the patient's power is only a question of time.

BLOODLETTING IN BERI-BERI.

A JAPANESE physician has had recently some excellent results from bloodletting in beri-beri or kakké, and in cases, too, which were not *in extremis* at the time, as some, which were said to have been benefited by similar treatment several years ago, were when venesection was employed as a last resource. The idea of the value of bloodletting occurred to this practitioner from seeing three cases of the disease in which menstrual or hæmorrhoidal hæmorrhage had been followed by marked improvement. The main symptoms are those of anæmia; and it will be remembered that, paradoxical as it appears, venesection has recently been strongly recommended and practised for extreme anæmia. The method employed is not bleeding from a vein in the arm, but cupping—from 100 to 250 cubic centimetres of blood being abstracted in two or three sittings.

QUACKERY IN BRUSSELS.

THE attention of the Belgian public, both medical and lay, is, as has already been stated, being called by the efforts of the press to the sad results which have followed the prolonged visit of the oriental eye quack, Golam Kader, to Brussels last year. A further report has just been made to the Brabant medical commission by Dr. van den Bergh, which enters more into details than the paper of Dr. Legros, which dealt only with the subject of granular ophthalmia. Dr. van den Bergh states that in his out-patient department, which is situated in the centre of the city, there were seen in the month of April, 1891, 423 separate patients, the number of cases of granular ophthalmia being 55, whereas in the corresponding month of the year 1890 there were only 320 patients seen, of whom only 12 had granular lids. One woman who had had granular lids of a very chronic kind, after going to the quack, contracted violent purulent conjunctivitis of one eye, with a bad abscess of the cornea. Another woman had granular disease, together with double cataract, that on the right side being mature. By means of very assiduous treatment the granular condition had been sufficiently subdued to render it possible to think of operating on the cataract. Just at this time she fell under the care of the quack, and in a couple of months Dr. van den Bergh saw her again in a most pitiable plight, with acute granular ophthalmia and purulent discharge of a very obstinate character. Another woman

who consulted the quack for a simple weakness of sight came away with purulent ophthalmia on both sides. The following cases illustrate how the many vaunted "cures" were effected, and will give an idea of their value. A woman had complete detachment of the retina of the right eye, which was pronounced by Dr. van den Bergh incurable, the left eye being sound. She went to the quack, and curiously enough had a slight glimmer of perception of light afterwards, which was magnified into a complete cure, and trumpeted about as an example of Golam's success where an eminent hospital surgeon had pronounced cure to be impossible. So far from this being the case the poor woman is again a patient, with the right eye as blind as ever, and with the left suffering from granular pannus, which so seriously affects her sight that she can scarcely see to walk about. An old man had purulent dacryocystitis on both sides, as well as double cataract. Dr. van den Bergh had taken a great deal of pains to remove the dacryocystitis in order to be able to operate on the cataracts without danger of panophthalmitis; all was satisfactorily accomplished, and the man had excellent vision—of course with spectacles. Having heard, however, of the "cure" of the previous case, he had recourse to the quack, who promised to make him see well without glasses; instead of which he gave him granular ophthalmia. Two cases are mentioned in which patients who had cataract were operated on by Golam by the couching method, and lost their eyes completely. Perhaps the saddest of all the cases was that of a man who had double optic atrophy, and was only able to see a glimmer of light; after going to Golam throughout the summer he became affected with terrible inflammation in both eyes; the corneæ are now perforated and staphylomatous, the eyelids greatly swollen and everted, looking as large as hen's eggs, and discharging purulent matter. Such are the results of letting ignorant people meddle with eyes.

CHARING-CROSS MEDICAL SCHOOL.

WE recently announced that a scheme had been inaugurated for commemorating the long services of the late Dr. Julius Pollock and the late Mr. E. Bellamy in connexion with the Charing-cross Hospital. A meeting of the subscribers to the memorial fund was held at Charing-cross Hospital Medical School on Tuesday, May 19th, in order to decide what form the memorial should take. After several proposals had been discussed, it was ultimately resolved to apply the fund towards extending the present anatomical department, by adding a collection of specimens to the Anatomical Museum, to be called the Bellamy-Pollock Collection. The first list of subscribers was announced, from which it appears that an amount nearly approaching £100 has already been subscribed. At the request of several past students it was agreed that the subscription list should remain open for further contributions, which may be sent to Mr. Stanley Boyd, the Dean of the Medical School, Mr. R. C. Ackland, or to Mr. G. T. Bishop, the Secretary of the Students' Club, until the end of the present month.

CHANGES IN THE KIDNEY IN PHTHISIS.

THE condition of the kidneys in phthisis has never been fully investigated. Several observers have described a fibroid condition. Becquerel and Rayher concluded that Bright's disease was very frequently associated with tubercular disease of the lungs. Peacock in 117 cases of kidney disease found 30·7 per cent. of phthisis. Frerichs found that out of 42 cases of Bright's disease 6 also suffered from phthisis. Bamberger stated that the disease was found in 15 per cent. of those suffering from kidney disease. In the *Centralblatt für Allgemeine Pathologie und Pathologische Anatomie*, Feb. 1st, 1891, Dr. C. von Kahlden publishes his results on the same subject. He is of opinion that slight degeneration of the renal epithelium is almost always found in active phthisis. It may, however, be so slightly marked that it is only visible on microscopic examination, and even then may be easily overlooked. The kidney may be either normal in size or somewhat enlarged. Macroscopically the following conditions are noticed. The surface of the organ is smooth and yellowish in colour; the capsule peels easily; the cortex is usually slightly thickened, and also yellow in colour; the medullary portion is pale. The microscopic changes chiefly affect the cortex, the parenchyma being first attacked. The epithelial cells undergo fatty degeneration, but are occasionally replaced by fresh epithelial cells. The interstitial changes are therefore secondary, and generally slight, and take the form of a small round-celled infiltration, and some increase of the connective tissue. The glomeruli also take part in the degeneration. The cortex is not uniformly affected, but the changes take place in patches. These lesions are evidently chronic, as is shown by the thickened capsule, the atrophy of some of the glomeruli and the changes in shape of the epithelial cells of the tubules, these being altered from a club form to a cubicle or cylindrical shape. Clinical symptoms which accompany the renal degeneration are unreliable. Albumen in the urine is rarely present. The author states that the condition is one of a chronic parenchymatous nephritis, and thinks that it may be caused by the poisonous products of the tubercle bacilli.

A NOVEL CASE OF ISOLATION.

WHATEVER the measures adopted, the principle of isolation is the essence of all genuine disinfection. Its efficiency for this purpose was recently well shown at Epsom Common. One of the children in a gipsy encampment having been taken ill with scarlet fever was, along with its mother, very successfully separated from the rest of the community by the simple expedient of a ring fence made of rope drawn round the infected tent and regularly watched. The result has been that the slow progress of convalescence has been passed through and disinfection completed without further extension of the disease. The surveyor, Mr. Harding, is to be congratulated on the success of his novel and effectual manœuvre. The satisfactory result thus easily attained is of obvious importance in connexion with the approaching Derby day, with its attendant crowd of "all sorts and conditions of men" flocking to Epsom, and the simple method employed deserves to be remembered in case of later emergencies of a similar kind.

THE BRITISH INSTITUTE OF PREVENTIVE MEDICINE AND THE BOARD OF TRADE.

IT is somewhat difficult to understand the reasons which have weighed with the President of the Board of Trade in his decision to withhold consent to the omission of the word "limited" from the registered title of the British Institute of Preventive Medicine, as stated in the letter from Sir Joseph Lister which we published last week. The only opposition to the application appears to have been that raised on behalf of those who object to experimentation on animals; but we have yet to learn that this kind of work is such as to be henceforth regarded as having a commercial basis. We cannot but believe that if the President of the Board of Trade had waited until he had received Sir Joseph Lister's letter explanatory of the objects of the institute, he would not have hesitated to grant the required dispensation. It is not, as Sir Joseph Lister points out, the function of the Board of Trade to grant licences for vivisection; that

rests with the Home Secretary, and, although the action taken by the Board may be explained away on other grounds, it is impossible to doubt that the pleas of the objectors must have unduly influenced the decision arrived at. We regret this decision extremely, and must regard it as owing to a misconception of the main objects of the proposed institute. These objects are strictly scientific and charitable—to afford opportunity for the study of preventive medicine, and thus to benefit the community at large. It is bad enough that in this country the State should decline to aid in this direction, and that Great Britain should be singular in having no institution comparable, for instance, with the Imperial Hygienic Institute of Germany. We have grown accustomed to the neglect of such objects by our Governments, and it is the Englishman's way to rely far more upon private enterprise than on State aid in matters of scientific research. But it is far worse to find the State as represented by one of the Government departments actually putting obstacles in the way of the prosecution of work which ought by rights to be materially supported by it. The question does not, we fear, involve the Institute of Preventive Medicine alone. The decision of the Board of Trade in this instance may serve to show that, no matter what may be the grounds of objection to applications for registration without the word "limited"; no matter whether it be proved to demonstration that the objects of the petitioning body are purely charitable and carried on entirely without monetary profit to any of its supporters, yet if only the objectors be urgent enough in their demands, they are too likely to succeed in an opposition which can scarcely be characterised in strong enough terms. It is wholly foreign to our notions of "fair play" to prevent the carrying out of beneficent schemes, because a few people regard certain portions of such schemes with distaste.

CANADIAN MEDICAL CERTIFICATES.

THE College of Physicians and Surgeons of the Province of Quebec has, with the earnest coöperation of the universities, been endeavouring to get its certificates recognised in Great Britain on the principle of reciprocity. The terms of the Act of 1886 require, however, that before foreign or colonial diplomas can be recognised in England they must be recognised in the country in which they are obtained. Qualifications gained in Quebec are only recognised in the province of Quebec. Canada herself in other provinces does not recognise the certificates of the province of Quebec. In great questions this partial application of legislation provincialises and belittles; and it will have to be modified if countries with strong central Governments are to recognise those where local restrictions prevail.

MUSIC IN THE TREATMENT OF DISEASE.

THE value of music as a therapeutic method cannot yet be so precisely stated that we may measure it by dosage or by an invariably similar order of effects. Of its wholesome influence in various forms of disease, however, there can be little or no doubt. In making this assertion we do not, of course, assign to it any specific or peculiar action. It is no quack's nostrum, no reputed conqueror of ache or ailment. It is only, as we have already shown in a recent article, one of those intangible but effective aids of medicine which exert their healthful properties through the nervous system. It is as a mental tonic that music acts. Accordingly, we may naturally expect it to exert its powers chiefly in those diseases, or aspects of disease, which are due to morbid nervous action. The evidence of its utility on occasions where fatigue or worry has disturbed the proper balance and relation between the mind and body of the so-called healthy will explain its action in disease. We can readily understand how a pleasing and lively melody can awake in a jaded brain the strong emotion of hope, and energising by its means the languid nerve-control of the whole circulation, strengthen the heart-beat and refresh the vascularity of every organ. We can picture the same brain in forced irritation fretfully stimulating the service of the vaso-motor nerves, and starving the tissues of their blood-supply. Here, again, it is easy to comprehend the regulating effect of quieter harmony, which brings at once a rest and a diversion to the fretting mind. Even aches are soothed for a time by a transference of attention, and why, then, should not pain be lulled by music? That it sometimes is thus relieved we cannot doubt. It is especially in the graver nervous maladies, however, that we should look for benefit from this remedy. Definite statistics on the subject may not be forthcoming, but all that we have said goes to show that states of insanity, which are largely influenced by the condition of the sympathetic system, should find some part of their treatment in the hands of the musician. It is, therefore, for such cases especially that we would enlist his services.

DEATHS OF TWO EMINENT PHYSICIANS.

WE regret to record the death of Dr. Robert Martin, F.R.C.P., consulting physician to St. Bartholomew's Hospital; also of Dr. Henry Monro, F.R.C.P., of Upper Wimpole-street, and Orchard Leigh, Bonchurch, Isle of Wight, at the age of seventy-four, of influenza, a physician of repute in connexion with insanity and lunatic asylums. He was the author of several works on psychological topics, and was the president of the Medico-Psychological Association in 1864. We hope to be able in a future number to give some account of the professional careers of the above physicians.

RHEUMATIC FLAT-FOOT.

DR. F. B. HARRINGTON contributes a paper to the *Boston Medical and Surgical Journal* of April 9th of this year on "Flat-foot." He explains that whatever lessens the motion or the power of the foot, be it disease or injury, may be followed by temporary flattening, or other deformity of the foot, or by those symptoms which, although no deformity exists, may be attributed to analogous conditions. The extent of the deformity depends upon the amount of displacement of the bones and the extent of yielding of tissues. The acuteness of pain is not at all dependent on the degree of deformity. Very few of the cases are in any way connected with rheumatism, except that, being disabled joints, they are more liable to acute rheumatic arthritis, like other crippled joints. There is, however, a class of cases in which rheumatism is the primary cause of the flat-foot and the accompanying disability. Dr. Harrington relates two cases which well illustrate this condition. There is a considerable number of cases, he says, in which, after rheumatism, the deformity is slight or wanting, but the disability is great. Sometimes this disability is due merely to the arthritis which persists after the disappearance of the disease. Often it is a combination of arthritis and those conditions which, for the want of a better general term, we call "flat-foot." Great relief can be afforded in many of these cases by supporting the arch of the foot. The reasons for the appearance of flat-foot after rheumatism are many. The muscular power of the leg and foot is diminished. The tissues are softened by inflammation. The effort to use the foot with the least discomfort—that is, with the least motion—induces the patient to abduct the feet. The patient swings the feet along with the toes diverging, and walks with little or no motion at the ankle. This necessarily throws him upon the inner border of the foot, and on account of the weakened state of the

foot is more likely to produce breaking down of the arch. At the same time the abductor muscles, by their persistent effort to evert and fix the foot, are brought into a state of spasm and become contracted. Dr. Harrington draws special attention to the importance of correct use of the feet after rheumatic attacks, and the avoidance of such deformities as he describes. If patients use the feet while they are still painful, they should be watched to see that they do not do positive injury to them. If disability persists, even though no deformity can be seen, much relief may often be obtained by the use of foot-plates. The use of the plates should be combined with massage and appropriate medical treatment as indicated by the case.

MEDICATED LOZENGES.

AMONG the niceties of therapeutics nothing perhaps is more irregular, more irrational or unscientific than the custom of administering powerful drugs in the form of lozenges or sweetmeats. Again and again has the custom of self-medication resulted in the most disastrous consequences to those who practise it, yet it is in these days a flourishing fashion. In its more open forms it is of too clearly injurious tendency to find much favour at the hands of the profession. We cannot but regret, therefore, that in the pharmacopœial sanction of the drugged sweetmeat it should appear to possess a species of medical recommendation, for, however we may disguise the fact, there can really be no question that the art of the confectioner is throughout a bid for popular custom. Its employment in the preparation of potent remedies we cannot but regard as a mistake. In appearance, if not intention, it suggests a needless transfer of professional responsibility, the consequence of which it is impossible to forecast. As a recent illustration of the serious mischief which may arise from this practice we may notice the case of a child who was recently poisoned by helping himself to a packet of the well-known trochisci morphiæ which had been prescribed for his father. There is danger, though less, for the parent as well as the child in this mode of prescription. No doubt it may be modified by specific directions as to use, but even thus it is hardly possible to invest with any permanent and adequate suggestion of danger the familiar aspect of a lozenge. This form of remedy is now indeed but little used, and might without loss be discarded as a means of treatment.

"PSEUDO-SYRINGOMYELIA."

SUCH is the name which Charcot gives to a case which was lately the subject of one of his lectures delivered at the Salpêtrière, and published in the last number of *La Semaine Médicale*. The patient was a young man of twenty-three, who was accidentally wounded by a bullet in the back some years ago. The bullet entered to the right of the seventh cervical vertebra, and was never extracted. At the time of the accident the patient had paresis of the right arm and leg, but this soon cleared up, and in fifteen days he was able to be about as usual. For three years he remained quite well, until one day, in lifting a heavy weight, he had a sudden acute pain in the back. He also had paresis of the right leg, and this never quite recovered, but passed into a condition of spastic rigidity. From the time at which this sudden pain came (eighteen months ago) he had gradually become worse, until he was in the condition described in the lecture. He had wasting of the muscles on the inner side of the right arm, and of those forming the thenar and hypothenar eminences, with characteristic loss of thermal and painful sensibility and retention of tactile, this, however, being limited to the inner side of the forearm. There was a well-marked spastic condition of the right leg, and a zone of sensory disturbance below the axilla on the left side. This disturbance consisted in inability to distinguish different kinds of sensations, every kind of sensory stimulus apparently producing only a sort of painful thrill. The pupil was contracted, but reacted to light; there was no nystagmus. A spinal curvature was also present, so that the picture presented by the case had a very close resemblance to that of syringomyelia, and indeed the case had been sent to Charcot with this diagnosis, and gave him the opportunity of calling attention to the liability of being deceived by such a case. The view which he took of it was that the bullet had penetrated to the vertebral column, that under the exertion referred to at which the present condition had its commencement, a collapse of the bodies had taken place, giving rise to pressure on the first dorsal pair of nerves, associated with the usual result of pressure on one side of the cord. Such a diagnosis of course makes a great difference in the prognosis; for whereas in syringomyelia there seems to be little hope of cure or even amelioration, in such a case as this the prognosis is at least not desperate, even without surgical treatment, and in the present state of spinal surgery may even be regarded as hopeful.

ARMY MEDICAL STAFF.

THE officers of the medical staff are awaiting the result of the recent conference between Sir Andrew Clark and Dr. Farquharson, M.P., and the Secretary of State for War. Mr. Stanhope was to consider and furnish an early reply to the points laid before him, and it is very desirable that some official expression of his opinion and judgment should be promulgated soon, seeing that, in the meantime, there are various rumours as to the Minister for War's intentions.

PERONEAL TYPE OF MUSCULAR ATROPHY.

DR. DONKIN makes another contribution to the literature of this curious condition in the last number of *Brain*. The cases which he reports are three in number, a father and two children—a boy and girl. The boy, aged nine, was first seen, and in him the condition was well marked. He had a high-stepping gait, and the ball of the foot was brought down suddenly and before the heels; the muscles below the knees were wasted, the thighs appearing normal, and sensibility seemed to be blunted. The knee-jerks were present, and there was no ankle clonus. The upper extremities presented the ordinary appearance seen in progressive muscular atrophy—wasting of thenar and hypothenar eminences,—and the wasted muscles showed either absence of or greatly diminished faradaic irritability. A similar condition was present in a sister aged seventeen, and in the father aged forty-two. In all three patients the weakness and wasting began in the legs, and the hands were noticed to be affected about two years later. Of a family of eight, four are alive, two suffering in this way, and the paternal great-grandfather is said to have suffered in his hands in a similar manner.

A LURKING DANGER.

IT is no new thing that stamps and envelopes should be blamed as a cause of numerous petty illnesses which occur to those who constantly use them. The connexion between a habit of licking the gummed surface and an irritated tongue is not entirely imaginary. The mere contact of the mucous membrane with an adhesive substance, if often repeated, must encourage abrasion of the former. Another element of danger exists in the well-known impurity of office gum. We would not indeed credit all that has been said by talkative alarmists on this subject. The supposed transference of infectious disease by this means is probably something more than a myth evolved by the brain of an

amateur germ-student. So is it in some degree with the communication of other poisonous properties in like manner. An illustrative case in which the receiver of a letter is said to have become violently sick after moistening with the tongue a gummed envelope which had previously been licked by an opium taker is, however, entirely too dazzling to be appreciated by an ordinary comprehension. Perhaps it is to be regarded as a literary tit-bit intended for the Transatlantic intellect. There are facts of daily occurrence which tend to show that there is a definite relation between the germ theory and some common sequences in the use of gum. Thus a fresh cut in the skin, if covered as it often is with the gummed paper surrounding stamps, is liable to inflammation. The occasional virulence of this process, moreover, favours the conclusion that it is not the mere consequence of retained discharges, but is due to injurious matter added by the dressing itself. Certain precautions are therefore in this connexion as natural as convenient, and we need hardly emphasise the teaching of experience with regard to them. It is usually as easy as it is advisable to avoid licking stamps, and it is never safe to apply them to a wound. The evident advantage of adding some preservative to gum during its manufacture needs no comment.

HEMIOPIC HALLUCINATIONS.

WITH reference to the paper on this subject recently published by Dr. Peterson of New York, of which a notice appeared in our columns, Dr. Schweinitz in the *New York Medical Journal* refers to a case published by him as one of a series in 1887 in the *Journal of Nervous and Mental Diseases*. The patient was a young man of twenty-nine, who had several convulsions and was the subject of optic neuritis with left homonymous hemianopsia. He became mentally deranged and was sent to an asylum. Preceding the onset of hemianopsia he had visions of chairs, tables, and other common things floating about. Although he was quite rational at the time, he was unable to state whether those visions disappeared coincidentally with the onset of the hemianopsia or persisted for a time. He died afterwards in the asylum, and at the necropsy there was found a gummatous infiltration at the base of the brain pressing on the right optic tract. The author is unable to state definitely that there was no affection of the occipital lobe, and he regards the case as one of the class described by Dr. Peterson in which the hemiopic hallucinations are simple and transitory.

THE REVISION OF NOTIFICATION CERTIFICATES BY MEDICAL OFFICERS OF HEALTH.

IT is with regret that we find it necessary to recur to the unfortunate attitude which has been adopted by a few medical officers of health towards medical practitioners notifying disease under the Notification Act, 1889. According to the printed proceedings of the medical officer of health of a rural district, and to certain published correspondence which has ensued, it appears that the official in question "investigates" every case of infectious disease notified to him, the rural authority "insisting" on this practice, although no such duty devolves on the medical officer of health under the order of the Local Government Board, neither is he paid for any such work. And further, when this official does not "think" the diagnosis of his fellow practitioner to be right, he gives his sanitary authority the benefit of his unfortunate doubts, and literally returns the notification to the medical practitioner signing it. Naturally this has resulted in considerable indignation, and when such a practice is resented, the complaining practitioner is calmly told to "prove" the correctness of his diagnosis, the official in question still holding "that many of the cases notified . . . will not bear inspection." Unless there be a definite desire on the part of certain medical officers of health to wreck the system of notification, the attitude to which we have adverted had better come to a speedy end. The Act in question was not intended to secure a system of espionage; the Local Government Board have distinctly announced that it cast "no new duty" on medical officers of health; sanitary authorities have no right to demand such behaviour and practices on the part of their officials; and in this very case the Local Government Board have distinctly declared that neither the statute nor any order "imposes on a medical officer of health any obligation to visit each case notified to him under the Act for the purpose of testing by personal examination of the patient the accuracy of the certificate, and it appears to the Board that it would usually be inexpedient that he should undertake such an examination unless he has reason to believe that the certifying medical practitioner is not acting in good faith." The last part of this opinion sets out the only condition under which such revision of certificates as we have called attention to can be justified. A sanitary authority has a right to be protected by its officers against fraud, and when fraud is suspected it may become the duty of a medical officer of health to test a notification return. But whenever this is done the proceeding should be carried out openly, with the knowledge of the practitioner whose certificate is in question; and the report should be submitted to the sanitary authority, who should themselves return the certificate or take any other needed action. But for a medical officer of health who only "thinks" he is correct in differing from a fellow practitioner to take action which, as the central authority suggest, ought only to be contemplated in the case of absence of "good faith," is a proceeding of which we trust we have heard the last.

GANGRENE OF THE LUNG.

IN the *Allgemeine Wiener Medicinische Zeitung*, No. 15, is an abstract of an interesting paper by Dr. Otto Hewelke on the etiology and treatment of gangrene of the lung. As regards the causal relationship which is supposed to exist between pneumonia and gangrene, Dr. Hewelke makes some important observations. He collected the reports of 2359 necropsies made at the Warsaw University, amongst which were 50 cases of pulmonary gangrene, and 146 cases of croupous pneumonia in none of which gangrene had supervened. From these data the author concluded that the occurrence of gangrene as a sequel of croupous pneumonia was only an accidental one, and stood in no causal relationship with the inflammation of the lungs. He suggested that a fresh infection must have taken place by means of the staphylococcus aureus or albus, probably from the inspired air, or decomposing material in the mouth or air passages, and that owing to the condition of the lungs the germs would find a favourable nidus on which to become engrafted. In regard to the treatment, Dr. Hewelke considered that the ordinary measures, such as the administration of turpentine, creasote, or inhalations of carbolic acid, only exert a palliative influence on gangrene of the lung, and he therefore attempted in undoubted cases a modified surgical treatment by antiseptic injections into the pulmonary tissue. The injections were made by means of a syringe holding about 2·5 ccm., and provided with a stout hollow needle about 5 or 7 cm. long. No unpleasant local effects were noticed. At first he used a mixture containing 2 parts of menthol, 3 of oil of eucalyptus, and 100 of water. Afterwards, however, he found it better to employ an alcoholic solution of thymol in the strength of 1 in 300, or 1 in 200. Not more than 2·5 ccm. should be injected at one time. In addition to the antiseptic action of the injections,

Dr. Hewelke was of opinion that they were beneficial on account of the slight irritation they produced, so aiding expectoration and accelerating the emptying of the cavities. The results obtained were satisfactory, the duration of the disease was lessened, the symptoms were not so severe, and the author considered that his preliminary researches denoted that in these injections is to be found one of the best methods for the treatment of this grave condition.

SANITARY ADMINISTRATION AT MIDSOMER NORTON.

THE action of the Midsomer Norton Local Board of Health in superseding their medical officer of health, Mr. Waugh, who has served the district with credit for seventeen years, is typical of that class of procedure that makes the intelligent public dread extension of the system of local government as opposed to a centralised control, and that actually led to the omission, from the Local Government Act, 1888, of the schedule by which important powers were intended to be transferred from the Local Government Board to County Councils and sanitary authorities. Mr. Waugh's offence lies in the fact that he has told his authority the truth, and the truth happens to be particularly unpalatable. An understanding existed that the chairman was to nominate Mr. Waugh for re-election, but a majority who had read Mr. Waugh's last annual report with "surprise and disapprobation" passed him over and elected another officer. Appeal to the Local Government Board has followed, but we fear it will be useless. That Board has no power to dictate to an authority whom they should appoint, and its function is practically limited to withholding assent to repayment of half the salary out of the county funds, in the case of appointments to which objection is taken. But even their objections must be such as would be recognised as valid under the statute, and they cannot be enforced merely because an authority decides that a skilled and trustworthy officer, against whom nothing can be said except that he has performed his duty, shall be replaced by a successor whom there is every ground for believing is also competent and trustworthy. The remedy lies with the community who have elected the body locally described as consisting largely of "sensitive men ..... who hungered for compliments on their zeal"; instead of desiring to know the true sanitary circumstances of the district which had been placed under their care in their capacity as representatives of the public.

ANTISEPTICS FOR DENTAL PURPOSES.

IT is not many years since it was laid down as a cardinal rule that the whole of the carious part of a decayed tooth should be removed prior to stopping, even if this involved exposing the pulp. Recently the view that better results may be obtained by not encroaching upon the dentine in near contact with the pulp, even should it be diseased, has become generally accepted; it is therefore a question of some importance how far this diseased tissue can be rendered innocuous. Of the microbes which are found in carious dentine, which are presumed to be the immediate cause of the lesion, some do not require oxygen in order to live and propagate, so that even if an air-tight filling is made this will be no guarantee against the further progress of decay. Dr. Miller of Berlin has been for some time past engaged in a series of experiments to show the relative value of various antiseptics for sterilising carious dentine. A 5 per cent. solution of trichloride of iodine seems, from these experiments, to be by far the most powerful germicide and has no escharotic action, but, on the other hand, is decidedly acid in reaction. Next comes bichloride of mercury, followed by peroxide of hydrogen, which latter does not appear to have much penetrating power, probably due to the products of decomposition present in the superficial layers of the decayed dentine disengaging the atom of oxygen, leaving only H_2O to act upon the deeper portion of the dentine. Carbolic acid gives good results. It is a very active antiseptic agent, but falls considerably behind bichloride of mercury and trichloride of iodine in its penetrating power. Chloride of zinc is about equal to carbolic acid, but its escharotic action and the pain attending its application are distinct disadvantages. The essential oils, pyoktanin, benzoic acid, alcohol, thymol, and resorcin were examined, but found to be of comparatively little value.

METROPOLITAN HOSPITAL SUNDAY FUND.

IN accordance with our usual custom, we shall produce in connexion with next week's impression of THE LANCET a Supplement in support of the Hospital Sunday Fund collection, which will be gratuitously circulated and in the hands of the ministers of religion of all denominations within the metropolitan area for distribution amongst their respective congregations on Sunday, May 31st. Many of our readers will be in a position to facilitate the distribution of this Supplement, and to further its effect by bringing under the special notice of clergymen or others of their acquaintance the object of this publication, and explaining how its judicious use may be made to subserve in a very important degree the interests of the medical charities of the metropolis, and especially the success of the Hospital Sunday Fund collection which will be made a week later, on Sunday, June 7th.

LECTURES AT THE ROYAL COLLEGE OF SURGEONS.

WE have already announced that Dr. John Rose Bradford will deliver a series of three lectures on the Physiology of the Vaso-motor System on Monday, Wednesday, and Friday, May 25th, 27th, and 29th, at the Royal College of Surgeons. Following on these, Professor James Berry will lecture on the subject of Goitre, its Pathology, Diagnosis, and Surgical Treatment on June 1st, 3rd, and 5th. Professor William Anderson will take for his subject the Varieties, Pathology, and Surgical Treatment of Contractions of the Fingers and Toes, on June 8th, 10th, and 12th; and Professor Reginald Harrison will discourse on Stone in the Bladder, Enlarged Prostate, and Urethral Strictures on June 15th, 17th, and 19th. The lectures will be given at 5 P.M.

"DIAGNOSIS AND TREATMENT OF EPILEPSY."

THIS is the title of a paper by Dr. James Stewart in the last number of the *Montreal Medical Journal*. While there is nothing absolutely fresh in what he has to say concerning the diagnosis, he emphasises several important points, especially calling attention to the difficulty of the differential diagnosis of epilepsy from hysteria, and to the close connexion of epilepsy with megrim. He also quotes several cases illustrating the relation of epilepsy to traumatism and to alcoholic excess; but with regard to the latter of these, it seems to us that the occurrence of a fit, or even several fits, after a drinking bout does not necessarily imply that the patient suffers from epilepsy, any more than does the occurrence of fits in kidney disease or any other condition of toxæmia. In the matter of treatment, Dr. Stewart warns against the indiscriminate use of bromide; but as regards other drugs, he confesses that his experience of their use is small. He attaches much importance, however, to the removal of the epileptic from what are undoubtedly often very harmful home surroundings, and everyone who has experience of the hospital treatment of epileptics will be able to endorse the view that removal from those surroundings is often of the greatest efficacy. As to diet, the author thinks that a good nitrogenous diet

is not only desirable, but necessary, to many adolescent epileptics; while in the case of senile epileptics, a reduction to a carbohydrate diet is often most beneficial. The paper is a plea for the rational treatment of epilepsy, and for the treatment of each individual case on its own merits.

A NUMBER of medical practitioners, feeling that it would not be right to allow the major portion of the expenditure connected with the opposition to the two Midwives Registration Bills to fall upon Dr. Rentoul, have commenced a subscription to reimburse that gentleman the £160 which he has expended in his opposition to the Bills. Some £25 have already been raised. Subscriptions are being received by Dr. Hugh Woods, 11, Archway-road, Highgate.

WE understand that the in-patient department of the Middlesex Hospital is to be closed for a period of two months from July 20th next, in order to allow of teak flooring being laid down in five of the principal wards. The cancer wards will, however, remain open, and some beds will be retained for cases of great urgency. The out-patient department will also be open as usual.

CHOLERA appears still to prevail in Manipur and Burmah, and has numbered two lieutenants of the Indian army amongst its victims. Six fatal cases also are reported to have occurred amongst the 16th Rifles at Rangoon, whilst the disease has played sad havoc amongst the Darjeeling coolies.

THE INFLUENZA EPIDEMIC.

WE are glad to learn that the influenza outbreak has rapidly diminished in Yorkshire during the past week, and that the mortality in Sheffield is fast regaining its more usual limits (the rate for the week ending May 16th being 34·5 per 1000). At the same time the affection is still very prevalent in other parts of the country. Our Liverpool correspondent says that the deaths primarily attributable to influenza during the past week amounted to 21, those from bronchitis to 80, from pneumonia 44, the total death-rate for the week being 31 per 1000. At Leicester 8 or 9 deaths have been primarily attributed to influenza, and the mortality from respiratory diseases is still high. The death-rate of London has been steadily rising during the past four weeks—viz., from 21 in the week ending April 25th to 26·1 for the week ending May 16th. How large a part of this increase is due to the prevalent epidemic may be seen from the fact that the deaths from respiratory diseases last week numbered 620, or 303 in excess of the corrected average, 352 deaths being attributed to bronchitis and 207 to pneumonia; whilst the deaths primarily attributed to influenza rose to 266, "being more than double the highest number in any week of last year." These returns justify the conclusion as to the greater intensity of this year's invasion, although the number of individuals attacked seems to have been less, judging from the hospital returns given below. Amongst the victims to influenza and its complications we regret to have to record Mr. E. Long, R.A., Lord Edward Cavendish, M.P., Sir Patrick Colquhoun, and Mr. Henry Sampson of the *Referee*. Many of the statesmen who have been attacked are happily convalescing, and there have been but few fresh cases amongst members of Parliament during the Whitsuntide recess. We may hope that the indications of a decline in the epidemic may be fulfilled; but it may not be out of place to remind our readers to warn convalescents to avoid exposure during the present inclement weather.

The number of patients treated for influenza at the various metropolitan hospitals since last Thursday seems to have slightly decreased. This, however, may be partly accounted for by the intervention of the Whitsuntide holidays. At the London Hospital 221 cases were treated; at Guy's, 50; at St. Mary's, 82; at University, 63; at Charing-cross, 150; at Westminster, 50; at St. Thomas's, 209; at the Middlesex, 110; at St. George's, 42.

BRISTOL MEDICAL SCHOOL.

THE students of the Medical School, affiliated to University College, Bristol, assembled last week for the prize distribution at the Lecture Theatre of the Museum and Library. Professor Lloyd Morgan, Dean of the College, presided, and the prizes were distributed by Dr. Long FOX, who congratulated the school upon a good average of students who had passed the necessary examination, and the general excellence of the work. English medical students showed a higher sense of the responsibilities of life, a deeper devotion to duty, a more assiduous desire to fit themselves for a profession second to none in usefulness to all classes of men than any other body of young fellows of the same age. Reviewing the immense strides made in medical knowledge in the last half century, Dr. Fox said it would be impossible even to touch upon a few of the scientific thoughts of that period without glancing at one of the most important suggestions of the age, the theory of evolution, in which Darwin's name must ever be honourably associated. Probably those most anxious for its universal reception would be the first to confess that as yet very much remained to be proved. He entreated students to approach it in an unbiased spirit. Whether in the future the whole theory of evolution was worked out by convincing proofs or not, their attitude towards its chief apostle must be one of reverential admiration, of thankfulness that so scientific a spirit had been allowed to rise in their own time, and by his world-wide observations to enrich so largely their knowledge of physical facts and physical phenomena.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

South Molton Urban District.—Notification has been adopted in this district, and Mr. Albert Hind has organised visits to the elementary schools so as to secure early preventive measures in case of the onset of infectious diseases. Markets, slaughter-houses, dairies, &c., are periodically visited, and there have been numerous systematic inspections, details being obtained as to the sanitary circumstances of 320 of the dwellings of the labouring classes, and recommendations to owners and others have been based on the information acquired. Evidently that class of work which makes but little display, but which forms the basis for the best sanitary progress, is steadily going on. Last year the death-rate was 16·4 per 1000 living.

Northampton Urban District.—This borough is proceeding with the much-needed erection of a new infectious hospital at Kingsthorpe; improvements are being made in the condition of the sewers, and the new water-works are completed. This latter measure should, we hope, soon secure the closing of all domestic wells, the existence of which in this borough of some 66,000 people can only be associated with risk. The Notification Act is said by Mr. L. F. Cogan to work well, and it certainly reveals the material for a good deal of work in the way of restricting infection, whether in hospital or as regards school measures. We hope before long to find that private slaughter-houses, many of which are most unsuitable for their purpose, have been got rid of. The infectious fevers were, happily, by no means very fatal last year, and the general death-rate was 16·8 per 1000.

Bollington Urban District.—This report gives a general account of the diseases that have prevailed during 1890, and in referring to erysipelas it is stated that the disease, which was met with in different parts of the district, was in almost every instance associated with bad drainage and unsatisfactory sanitary arrangements. This, and other points adverted to, seem to indicate that no house-to-house inspection and record of the sanitary circumstances of individual premises has been made. If it had, the conditions referred to would probably have been discovered and remedied before instead of after the occurrence of disease. Mr. Allen gives the death-rate for this little town of some 4000 people as 21·2 per 1000, a rate which we hope is an unusual one.

Swinton Urban District.—This report deals mainly with statistics and disease occurrences, but it is added that the sewerage system, in the main, works well, that privies have been improved, and that the principle of using waste water from sinks is to be extended in its application to water-closets. All depends, in so far as success is concerned, on the adequacy of flush provided, which means storage and automatic discharge in bulk. Some of the contrivances referred to are a source of nuisance, others answer their purpose fairly well for out-door closets. Mr. W. M. Jones gives the 1890 death-rate as 16·9 per 1000 of the population.

Durham Rural (Western) District.—Twice during 1890 has scarlatina appeared at milk farms; and in enforcing the provisions as to dairies &c., it is reported by Dr. E. Jepson that the loss to the farmer is aggravated by the circumstance that the health authority have made no provision for the isolation of the sick, and hence have needlessly prolonged stoppage of trade results. In some respects the authority have made progress, and it is to be hoped that a sufficient staff will be provided for the proper supervision of the new by-laws, and especially of those as to new buildings—a matter that will in the future be largely concerned in the healthiness of the district. Especially should care be taken to prevent recurrence of the mischief that has followed on the old midden-privy system. In 1890 the death-rate was 17 per 1000 living; and amongst the diseases notified were 217 cases of scarlet fever.

Haslingden Urban District.—Dr. J. A. Harrison has some adverse remarks to make on the need of reporting with sufficient plainness to satisfy the Central Authority, and on the risk of thus displeasing a local authority with whom absolutely rests the question of his retention in office. But he is able to report a progressive diminution in typhoid fever, a new drainage system, the replacement of faulty privies by tub-closets, and other like matters. The reforms mostly needed at present relate to the defective surroundings of farms, and to the need of an isolation hospital for current infectious fevers, without which notification can only do a limited amount of good. The death-rate last year was 12·6 per 1000 on over 16,000 people.

Winchester Urban District.—Mr. T. C. Langdon enters somewhat in detail into the question of the vital statistics for the city during 1890, and gives the general and the zymotic death-rates as 14·1 and 0·9 per 1000 respectively. The occurrences of infectious disease presented no features of especial interest, but it is satisfactory to note that improvements continue, and that the isolation hospital was found useful as a means of controlling infection. Improvement of the system of drains for surface water and also for subsoil water is a matter that is put forward as needing attention.

Surbiton Urban District.—Dr. Coleman, in the best estimate of population he could make, records the general death-rate during 1890 as 10 per 1000; he gives a detailed report as to an occurrence of diphtheria in which twenty-seven persons were attacked in twenty-two houses, all having their milk from the same source; and as regards the question whether milk need be boiled before consumption now that the disease has passed, he wisely says that it is, for many reasons, a prudent thing to do at all times. Means of isolation for first attacks of infectious diseases are still needed, and though the rural authority have a hospital near by, they do not seem inclined to admit cases from the urban district, from the inhabitants of which they did not receive much help when they erected their present buildings.

Bacup Urban District.—Dr. J. Brown reports that the notification of infectious diseases is proving of much value both from a practical and a scientific point of view, and he also refers to the isolation hospital as having been of material service. Phthisis causes some excess of disease, and the need of its prevention in Bacup seems to call for the precautionary use of respirators in certain trades, and for adequate ventilation of bedrooms; the latter requisite being one needing general application elsewhere than at Bacup. The infant mortality was 117 per 1000 births; the zymotic rate was 1·7 per 1000 living and the general rate was 18·1.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5963 births and 5772 deaths were registered during the week ending May 16th. The annual rate of mortality in these towns, which had increased in the preceding four weeks from 22·5 to 28·9 per 1000, further rose last week to 30·1, the highest rate on record. The rate was 26·1 in London and 33·3 in the twenty-seven provincial towns. During the first six weeks of the current quarter the death-rate in the twenty-eight towns averaged 25·9 per 1000, and exceeded by 4·7 the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 16·1 in Hull, 19·1 in Brighton, 23·3 in Sunderland, and 23·6 in Cardiff; the highest rates were 40·2 in Leicester, 41·9 in Manchester, 43·5 in Leeds, 50 in Bradford, and 51·6 in Huddersfield. The exceptionally high rates in the last-mentioned towns were due to the fatal prevalence of influenza. The deaths referred to the principal zymotic diseases, which had been 461 and 442 in the preceding two weeks, further declined last week to 401; they included 167 from whooping-cough, 104 from measles, 45 from diarrhœa, 34 from "fever" (principally enteric), 32 from diphtheria, 19 from scarlet fever, and not one from small-pox. These diseases caused the lowest death-rates in Brighton, Birkenhead, Wolverhampton, and Sunderland; and the highest in Bristol, Plymouth, Leicester, and Portsmouth. The greatest mortality from measles occurred in Huddersfield, Leicester, Bristol, Blackburn, and Portsmouth; from scarlet fever in Preston; and from whooping-cough in Liverpool, Salford, Manchester, Plymouth, Leicester, and Newcastle-upon-Tyne. The mortality from "fever" showed no marked excess in any of the twenty-eight large towns. The 32 deaths from diphtheria included 19 in London, 2 in Leicester, and 2 in Salford. Small-pox caused no deaths in any of the large towns last week; 35 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, but not one in the Highgate Small-pox Hospital, on Saturday last. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 924, and showed a slight increase upon the number on the previous Saturday; the patients admitted during the week were 118, against 100 and 79 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 588 and 584 in the previous two weeks, rose again to 620 last week, and exceeded by 303 the corrected weekly average. The causes of 75, or 1·3 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Sunderland, Cardiff, and in three other smaller towns; the largest proportions of uncertified deaths were recorded in Blackburn and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased from 22·1 to 23·9 per 1000 in the preceding three weeks, further rose to 24·1 during the week ending May 16th, but was 6·0 below the mean rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 10·8 in Perth and 10·9 in Greenock to 28·4 in Glasgow and 33·1 in Paisley. The 630 deaths in these towns showed an increase of 5 upon the number in the preceding week, and included 32 which were referred to whooping-cough, 24 to measles, 12 to diarrhœa, 6 to "fever," 6 to scarlet fever, 3 to diphtheria, and not one to small-pox. In all, 83 deaths resulted from these principal zymotic diseases, against 80 and 72 in the preceding two weeks. These 83 deaths were equal to an annual rate of 3·2 per 1000, which was 1·1 above the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 25 in each of the preceding two weeks, rose last week to 32, of which 14 occurred in Glasgow, 8 in Dundee, 4 in Paisley, and 4 in Edinburgh. The deaths referred to measles, which had declined from 43 to 22 in the previous three weeks, were 24 last week; 10 were recorded in Paisley, 9 in Glasgow, and 5 in Edinburgh. The 6 fatal cases of scarlet fever showed a decline of 5 from the number in the preceding week, and included 4 in Glasgow. The 6 deaths referred to different forms of fever showed a further increase upon recent weekly numbers, and included 5 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had risen from 143 to 157 in the preceding three weeks, declined to 141 last week, but exceeded by 33 the number in the corresponding week of last year. The causes of

60, or nearly 10 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 23·0 to 26·4 per 1000 in the preceding three weeks, declined again to 25·5 during the week ending May 16th. During the first six weeks of the current quarter the death-rate in the city averaged 26·2 per 1000, the rate for the same period being 22·5 in London and 20·2 in Edinburgh. The 173 deaths in Dublin during the week under notice showed a decline of 6 from the number in the preceding week, and included 5 which were referred to whooping-cough, 1 to diphtheria, 1 to "fever," but not one either to small-pox, measles, scarlet fever, or diarrhœa; in all, 7 deaths resulted from these principal zymotic diseases, against 4 and 6 in the preceding two weeks. These 7 deaths were equal to an annual rate of 1 per 1000, the rate from the same diseases being 1·8 in London and 2·5 in Edinburgh. The fatal cases of whooping-cough, which had been 0 and 4 in the previous two weeks, further rose to 5 last week. The death referred to diphtheria was the first recorded in the city since the beginning of April. The 173 deaths in Dublin last week included 31 of infants under one year of age and 50 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a further increase upon the numbers recorded in recent weeks. Four inquest cases but no deaths from violence were registered during the week, and 56, or nearly a third, of the deaths occurred in public institutions. The causes of 21, or more than 12 per cent., of the deaths last week in the city were not certified.

THE SERVICES.

MEDICAL STAFF CORPS.—His Excellency, General Sir Lothian Nicholson, K.C.B., commanding the forces at Gibraltar, has, we understand, conveyed to Surgeon-General Meadows the following expression of his opinion of the services rendered by the officers and men on the occasion of the wreck of the ss. *Utopia*, which occurred on March 17th:—"The willingness with which they have discharged their exceptionally difficult and painful duties in connexion with the disposal of the bodies of victims from the *Utopia* disaster, shrinking from none of the hard, and oftentimes revolting, work thereby entailed upon them, prompts me to place on record my high sense of their most excellent conduct, and to request you to convey to them the thanks, not only of the Government, which I have the honour to administer, but of the public at large."

INDIAN MEDICAL SERVICE.—The Queen has approved of the retirement from the Service of Brigade Surgeon Robert Gray, Bengal Medical Establishment (dated April 3rd, 1891).

Madras Medical Establishment.—Surgeon-Major (ranking as Lieutenant-Colonel) Arthur Luke Hackett to be Brigade Surgeon (dated Jan. 27th, 1891).

Bengal Subordinate Medical Establishment. — Senior Apothecary, Second Grade (ranking as Honorary Lieutenant), Richard Francis Knight to be Senior Apothecary, First Grade; and Apothecary, First Grade (ranking as Honorary Lieutenant), Christopher Hart to be Senior Apothecary, Second Grade (both dated Aug. 31st, 1890).

Madras Subordinate Medical Establishment.—To be Senior Apothecaries, Second Grade (ranking as Honorary Lieutenants): Apothecary, First Grade, Samuel Charles White (dated Jan. 16th, 1891); Apothecary, First Grade, Theophilus Todd (dated March 11th, 1891).

Bombay Subordinate Medical Establishment.—Senior Apothecary, Second Grade (ranking as Honorary Lieutenant), Diego Sant Anna de Lima to be Senior Apothecary, First Grade (dated Aug. 31st, 1890).—To be Senior Apothecaries, Second Grade (ranking as Honorary Lieutenant): Apothecary, First Grade, Wm. Reith Scroggie; and Apothecary, First Grade, Antonio Andrew De Souza (both dated Aug. 31st, 1890).

VOLUNTEER CORPS.—*Artillery:* 1st Glamorganshire: Acting Surgeon J. D. Griffiths, M.D., resigns his appointment (dated May 16th, 1891).—2nd Volunteer Battalion, the Royal Scots Fusiliers: Acting Surgeon W. J. Lawrie, M.D., to be Surgeon (dated May 16th, 1891).—1st Volunteer Battalion, the Cheshire Regiment: Acting Surgeon P. P. Young resigns his appointment (dated May 16th, 1891).—2nd Volunteer Battalion, the South Wales Borderers: Robert John Paton, M.B., to be Acting Surgeon (dated May 16th, 1891).—1st Volunteer Battalion, the Highland Light Infantry: Acting Surgeon N. Stark, M.B., to be Surgeon (dated May 16th, 1891).—1st Volunteer Battalion, the Princess Charlotte of Wales's (Royal Berkshire Regiment): Acting Surgeon A. G. Paterson, M.D., to be Surgeon (dated May 16th, 1891).

Correspondence.

"Audi alteram partem."

A TRIBUTE TO SURGEON PARKE.

To the Editors of THE LANCET.

SIRS,—I have made it a hard-and-fast rule never to write letters to newspapers or magazines unless such are actually called for; but on this occasion, on the eve of my departure for Africa, I beg of you space to insert these few lines as a small tribute to a medical man who has done his work so well and nobly. I refer to my old comrade, Dr. T. H. Parke, of the late Emin Pasha Expedition. I feel certain people have not fully realised the services of Dr. Parke to humanity. It matters nothing where or under what circumstances these services were rendered; blacks are capable of just as keen suffering and anguish as we white men are; and I therefore ask you to record the following incident, which is by far the bravest and noblest it has ever been my lot to be a witness of:—"When a portion of the expedition was stationed at Fort Bodo, in Central Africa, Dr. Parke, who was one of the number, was seized with a violent attack of bilious remittent fever; each day he grew worse, his temperature for the whole twenty days of illness never falling below 101° F. Quinine and arsenic and all other medicines failed, and Captain Nelson and I gave up all hope of his ever recovering. He was able only to crawl slowly about his hut, and could keep nothing of the poor foods we had to give him on his stomach. In spite of this, after about fifteen days' illness, when worn away to nothing, he crept out of his hut unawares to Nelson and myself, reached the hut of a black chief, Khamis Pari, and lanced for him a large and painful abscess, cleansed and dressed a wound, and was found by Nelson and myself in an absolutely helpless condition, and carried back by us to his hut. Next day reaction set in, and both Nelson and I expected he had only but a few hours more to live. He has never spoken to any of us, or to anyone that I know, a single word of this. I think it only fair to show to his brother medical officers what one of their number has done. Those who have suffered the agonies of a heavy fever will, I feel sure, appreciate and remember this brave action on the part of Dr. Parke."—I remain, Sirs, yours truly,

N. E. STAIRS, Captain.

St. James's-place, London, S.W., May 19th, 1891.

"SEQUEL TO A CASE OF ABDOMINAL SECTION."

To the Editors of THE LANCET.

SIRS,—Mr. Tait's communication on this subject in THE LANCET of the 9th inst. is more marked for its ingenuity than for its probability as a solution of the facts as I recorded them. I fail to see what occult meaning he has in view when he speaks of a "third operation if the full truth were known," nor do I think that the instance quoted by him of the man who had his testicles removed has anything to do with this case. My statement was a plain one. It embodies the full truth, and may be viewed without any side issues being imported. I will briefly recapitulate it. In 1884 I made an exploratory abdominal incision upon a girl at the General Hospital. Nothing was removed. The case was entered in the hospital record, and was afterwards attested by the house surgeon, and by others present at the time of the operation. Subsequently the patient went to Mr. Tait; he declares that, opening the abdomen again, he found one ovary ("set of appendages") *completely* removed, and that he removed the other set. The patient returned to my care unrelieved, and I have kept her under observation ever since. She has menstruated regularly all the time,

last year was married, and has given birth to a full-grown living child. Mr. Tait accuses obstetric physicians of having short memories; I am afraid that his memory has defects also. It is true that I did not answer his letters, but it is equally true that they were answered by the house surgeon at the time, who distinctly told Mr. Tait that nothing had been removed from the patient—a fact which Mr. Tait utterly ignored in his printed letter to the chairman of the Hospital Committee, and which he has again lost sight of in his present criticism.

I am, Sirs, yours faithfully,

May 20th, 1891. EDWARD MALINS.

To the Editors of THE LANCET.

SIRS,—On referring to my notes of Mr. Tait's operations in January, 1885, I find the operation on Dr. Malins' case is entered as having been performed on Jan. 26th. One ovary and tube were removed, and I find Mr. Tait quoted as stating that there was "no trace of ovary or tube on the left side—the peritoneum sweeping down from the uterus to the side of the pelvis—no nodule even." No reference is found to any ligature or its removal in this case. But in another operation similar to that on Dr. Malins' case, in that it was performed on a patient who had already had an abdominal section made by another surgeon, an operation done by Mr. Tait on Jan. 23rd of the same year, it is noticeable that I find the record that after removing a distended tube on one side Mr. Tait found and removed the knot of an old ligature on the opposite side. As these facts may have an important bearing on the questions now at issue between Mr. Tait and Dr. Malins, it appears necessary for me to bring them before your notice. These notes were made at the time of operation, when I was acting as assistant to Mr. Tait, and I was quite ignorant of their possessing any possible value as bearing on the controversy with Dr. Malins until some years after I had made them, when I was arranging them for reference.—I am, Sirs, yours truly,

JOHN W. TAYLOR.

Birmingham, May 12th, 1891.

THE USE OF CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—Together, with other earnest seekers after truth, I much regret the tone and lack of courtesy in Dr. Lawrie's reply to my letter upon this subject. Dr. Lawrie will hardly strengthen his position by accusing me of "gratuitous invention," or by the sneer conveyed in his sentence: "If Dr. Buxton were as familiar with the A B C of logic as *he would have us believe* he is with the A B C of the chloroformist's duties, he would know that proof of the absence of anything must always be negative proof." The italics are mine. Unfortunately for Dr. Lawrie's argument, he quotes my words, which are "its [i.e., the Hyderabad Commission's] conclusions are based upon purely negative evidence." I cannot suppose Dr. Lawrie can confuse the terms "evidence" and "proof" or the phrases "negative evidence" with "negative proof." If he does, I may perhaps be excused if I declined to accept his views upon the rules governing the constitution of the logical syllogism. Dr. Lawrie again indulges in calling what he regards as my "methods" by hard names; but this I can forgive, for he evidently does not understand in what they consist. Unless purely personal matters are excluded in discussing questions, the foundations of which are purely scientific, I must decline to participate in them. It cannot tend to increase our knowledge of the physiological action of chloroform for us to hear that Dr. Lawrie of Hyderabad regards Dr. Dudley Buxton's method as "impracticable," and its "absurdity only surpassed by the absurdity of another specialist." Such an unguarded manner of expression can subserve no useful purpose.

I am, Sirs, yours obediently,

DUDLEY W. BUXTON,
Anæsthetist in University College Hospital.

Mortimer-street, W., May 18th, 1891.

To the Editors of THE LANCET.

SIRS,—Surgeon-Major Lawrie's remarks in THE LANCET of May 16th upon my letter contained in your issue of April 4th are of such a nature that I trust your readers will peruse the latter before accepting his comments.

I am, Sirs, yours faithfully,

RICKARD W. LLOYD.

Russell-road, Kensington, W., May 20th, 1891.

ROYAL COLLEGE OF SURGEONS, IRELAND.

To the Editors of THE LANCET.

SIRS,—The Council of the Royal College of Surgeons, Ireland, is composed exclusively of Fellows resident in Dublin. More than half (I believe nearly two-thirds) of the electorate reside in the provinces, and yet this large body of Fellows has no direct representation on the governing body of their College. I ask, is this fair? Many of the leading Dublin surgeons think it is not, and have loyally welcomed the candidature of Dr. Kelly of Drogheda, and myself, on former occasions. We both intend to offer ourselves at the coming election for seats on the Council, and I hope we shall receive the support of the city and county Fellows as well as those in the army and navy and abroad.

I am, Sirs, yours faithfully,

Omagh, May 17th, 1891. EDW. THOMPSON.

"MIDWIVES REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—As this Bill has been frequently discussed in your columns, perhaps you will kindly allow me a word of explanation as to why the promoters have withdrawn the Bill from the papers of the House. I may say at once that it was not for the reason that there is any less desire for a good measure dealing with the question, as they believe the opposition comes from a comparatively small number of members of the profession, as is evidenced by the numbers both of the petitions against the Bill and the signatures attached thereto. On the other hand, most of the principal obstetricians and others have warmly supported the Bill or a modification of it, and the deputations both of doctors and ladies who waited upon the Lord President of the Council were so fully convinced that a Select Committee would be granted at an early day next session that the promoters deemed it much wiser to withdraw a Bill which pressure of public business would prevent from being properly discussed this session, with the determination, if possible, of pressing forward the measure to a conclusion next session, and they feel confident of success when they again take up the matter. In the meantime any improvements which may be suggested in the Bill will be fully considered, and, if possible, adopted.

I am, Sirs, yours faithfully,

Ennismore-gardens, May 15th, 1891. HY. FELL PEASE.

TESTIMONIAL TO DR. H. STEVENS.

To the Editors of THE LANCET.

SIRS,—On the resignation of Dr. Henry Stevens of his appointment of senior medical inspector of the Local Government Board many medical friends have shown a desire to express to him in some tangible form their appreciation of his zealous and faithful services and general courtesy in the performance of his duties as inspector of public vaccination. During the twenty-eight years Dr. Stevens was employed by the Government he visited nearly every town and village in England and Wales, besides Edinburgh, Glasgow, and Dublin, and thus came in relation with almost all the public vaccinators of the country. The committee appointed for raising a fund in honour of Dr. Stevens are desirous of procuring the coöperation of the medical profession generally. Subscriptions can be forwarded and paid to the "Dr. Stevens Testimonial Fund" at the bank of Messrs. Prescott, Dimsdale, Cave, Tugwell, & Co., 62, Threadneedle-street, E.C.

We are, Sirs, yours faithfully,

ROBERT N. FOWLER, Bart., M.P., Treasurer,
CLAUDE C. CLAREMONT, M.R.C.S., Chairman.

May 20th, 1891.

THE INFLUENZA EPIDEMIC.

To the Editors of THE LANCET.

SIRS,—In view of the really serious nature and fatal results of the influenza, I would like to suggest the desirability of making it one of the subjects for discussion at

the International Congress of Hygiene in London in August next. I believe the programme is already printed, but that ought not to preclude a subject which is exceedingly *apropos* to the scope and objects of the Congress.

I am, Sirs, yours truly,

Town Hall, Halifax, May 15th, 1891. D. AINLEY.

*** We commend the suggestion of our correspondent to the notice of the authorities of the Congress.—ED. L.

LIABILITY OF LEAD-MINERS TO LEAD-POISONING.

To the Editors of THE LANCET.

SIRS,—Your issue of March 7th is just to hand with a report of Dr. Oliver's first lecture (Gulstonian) on Lead-poisoning. I write to take exception to one remark in it wherein he very definitely states that "those engaged in lead mining never suffer." Here, in Broken Hill, we have very extensive lead mines, and our miners are very susceptible indeed to lead-poisoning, and often in a very severe form, more generally colic, but not infrequently coma and epileptiform convulsions. Further on Dr. Oliver remarks that "it is not the producer of the raw material who suffers; it is the smelter." We have also several smelters in blast here; but although we sometimes get smelters suffering from lead-poisoning, much more frequently we find it is the miner working down below, especially when working in the carbonate ore. I am, Sirs, yours truly,

J. BARTLEY, M.B., B.Ch.,
Resident Surgeon, Broken Hill Hospital,
Broken Hill, April 11th, 1891. Australia.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Royal Infirmary.

THERE will be an election for an assistant surgeon to the Royal Infirmary on June 2nd. Mr. R. A. Bickersteth, Mr. George G. Hamilton, Mr. Damer Harrisson, Mr. Arthur MacLeod Ross, and Mr. Thelwall Thomas are candidates for the vacancy. The contest will be a very keen one, and the election will, unfortunately for all concerned, be as heretofore in the hands of the trustees—i.e., subscribers of two guineas and upwards, donors of twenty guineas and upwards, and the clergy and ministers who preached on Hospital Sunday, Jan. 11th last. This mode of election entails considerable expense and trouble to each candidate, as well as much annoyance to the trustees. It is confidently expected that this will be the last election by the trustees, and that all future vacancies will be filled by the decision of an elective committee.

Suspected Murder and Mutilation.

The body of a boy aged ten was found in a black sailor's bag floating in the Sandon Basin at 4 A.M. on the 19th inst. The legs had been cut and sawn off below the knees, in order that they might be got more easily into the bag; a new knife and saw were also in the bag. The body was examined externally by Mr. Paul, Lecturer on Forensic Medicine at the Liverpool University College, and a post-mortem examination will be made to-day.

Death from Chloroform at the Royal Infirmary.

An inquest was held last week by the city coroner upon the body of a fruit porter aged thirty-six, who had been suffering from varicose veins. He was admitted into the Royal Infirmary, and consented to an operation being performed under chloroform. After being carefully examined, chloroform was administered by two trained assistants in the presence of one of the house surgeons. Before the deceased was properly under the influence of chloroform it was seen that something was wrong, his face becoming suddenly pale. The administration was at once stopped, and artificial respiration was immediately resorted to, but without avail. The deceased was apparently a healthy man, but at the post-mortem examination the heart was found to be in a state of fatty degeneration; this could not have been detected during life. So far as could be ascertained, the heart's action and respiration ceased simultaneously.

May 20th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Infirmary and the College.

THE second stage in the dispute between the Royal Infirmary and the College has now been reached. The Infirmary Board has issued to the public its reasons for refusing the site for a new hospital offered by the College. Summed up, they amount to this: that to extend the present institution by erecting a new building in Oxford-road would be more costly both in the first outlay and in the after maintenance; that they have already three large separate branches to administer; that a dual control with the College would inevitably lead to friction; that the present central position is more healthy and more convenient for patients as well as students; and that the building of a branch might ultimately lead to the removal of the entire institution from its present site. This manifesto is supported by a supplemental one from the Medical Board, who emphasise the advantages of the present site over the proposed new one. In reply, the College authorities immediately issued a counter-statement, putting before the public the case from their point of view. They insist that their primary object was the public good, and, secondly, the advancement and welfare of the medical school, which is an integral part of the College, and the interests of which they are bound to maintain and advance; that they have no wish or thought of removing or interfering with the present central infirmary; and that the public are quite competent to judge as to the expediency of further enlarging the old building or erecting a new one away from the crowded centre of the city. They assert that it is an anomaly that the College, which is practically the medical school, should have no control over an important part of their students' education—i.e., the clinical work,—and are sanguine that a scheme for conjoint representation on the governing body of the new hospital can be formulated, which would work satisfactorily and without friction; also that they will use their influence to obtain funds for building, and not leave this to the infirmary alone. Since these two sides of the question have been published, several free lances representing the opposing bodies have rushed into print, Dr. Ross and Messrs. Wright and Hardie representing the infirmary staff; whilst Drs. Sinclair and Leech have taken up the cudgels on behalf of Owens College. Apparently the next step must be an appeal to the public (as represented in the whole body of subscribers to the infirmary) as to whether the present building shall or shall not be enlarged; if not, then probably it will be left to the College to make the next move in getting a new hospital erected. The whole business has been an unfortunate one; but so far the weakness of the infirmary case is that the members of its staff are not unanimous in their verdict, at least one of the strongest supporters of the College being its senior physician, Dr. Leech.

Influenza.

The epidemic of influenza now prevailing here is quite as widespread as last year, and in many instances the attacks appear to be of greater severity. Amongst the numerous deaths which have been caused by it is that of the High Sheriff for Lancashire. Thirty-eight deaths were registered last week as primarily due to it, whilst no less than 146 were from respiratory diseases, nearly 100 per cent. in excess of the average. The death-rate last week was 42·2 per 1000.

Illness of Dr. Ward.

Professor Ward, principal of Owens College, is in a critical condition from a severe attack of pneumonia, but it does not appear that this was connected with influenza. He has been attended by Drs. Leech and Dreschfeld, in addition to his own medical attendant. At the time of writing, some improvement in his condition is reported.

Whitsuntide and the Weather.

After a few days of summer temperature we have got back again into almost midwinter weather. On Saturday and Sunday heavy falls of rain, hail, and snow, accompanied by a biting north wind, theatened to utterly spoil the great carnival week of Lancashire and Yorkshire. From Sunday-school scholars to cotton princes, "Whit week" is for all and everyone a holiday time. Yesterday the sun did, however, temper the keen wind for the 20,000 children who went in annual procession through the streets

to the cathedral, though it is to be feared that coughs and colds will be largely increased as the result of the three or four hours' exposure. As usual, the Volunteers of Manchester and the surrounding district are away for a week's training under canvas. Our infantry battalions have gone to Aldershot under the medical care of Surgeon-Major Armstrong; the Manchester Volunteer Medical Staff Corps, under the command of Surgeon-Major Crockwell, are at Lytham; the artillery are in their old quarters at Southport, with Surgeon Tomkins in charge of the medical arrangements; and the Salford corps is at Blackpool; whilst at numerous other places along the coast and in North Wales other regiments of the district are undergoing a week of camp life. From all these come reports of severe weather—frozen tents and water-cans on the first two nights; but, with the exception of a few colds or slight influenza, the health bulletins are favourable.

Manchester Air and its Improvement.

Attention continues to be directed to the condition of our atmosphere, and the town gardening section of the Manchester Field Naturalists' Society has issued an enlarged preliminary report of "the air analysis committee," which contains some interesting observations, set forth with a considerable amount of scientific accuracy, as to the various polluting constituents. Our local health authorities also have been showing considerable activity of late in attempting to diminish the evil, so far as it is increased by smoke offenders and chemical manufacturers. At the last meeting of the City Council Drs. Simpson and Russell made a vigorous appeal for a cheaper gas supply, maintaining that if this agent could be brought into general use as a fuel for domestic purposes in place of coal, more would be done to diminish the smoke nuisance than by any other means. Should this take place, it will be necessary for much better arrangements to be made in the construction of gas stoves and fireplaces so as to get rid of the injurious products of combustion which at present too often exist, or another and more injurious impurity will be added to the air we breathe.

Manchester, May 18th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Influenza in the North of England.

SINCE my last notes the epidemic influenza has considerably extended its effects, being felt right across the country from sea to sea. In some parts of Yorkshire it shows signs of abating, having, so to speak, burnt itself out. About the Thirsk and Malton district it is still very bad, where the Earl of Mexborough is reported to be dangerously ill. On Saturday last Dr. Young, the medical officer of health, died from the disease at Malton. He was sixty-nine years of age and was well-known at Newcastle, where he studied and graduated at Durham. The disease is said to be subsiding at Whitby, but at Thirsk it has spread considerably. At one of the "works" there are already fifty hands incapacitated by the disease. At Wigton and neighbourhood it is very prevalent, the vicar and his curate being prostrated by it. At Workington it is also rife, the mayor being amongst the sufferers. A very severe outbreak has taken place in Craven and Milnthorpe in the Kendal Union, where five of the poor inmates are lying dead, while the master and matron and fifty others in the house are laid by from the effects of the malady.

Newcastle Eye Infirmary.

The annual meeting of the Newcastle Eye Infirmary has been held and the biennial report of the committee was read, from which it appeared that the subscription list showed a marked improvement as compared with previous years, and the list of places from which patients have been sent indicates that the reputation of the hospital has spread very considerably. The essential character of the institution is a charitable one, and the committee would be glad if by charitable subscriptions they were placed in a position to be able to admit a greater number of non-paying patients, a class for which the hospital was originally founded. Since the last report there had been 5893 out-patients and 581 in-patients, making the large number altogether of 6474.

Saltburn: Opening of New Sea and Brine Baths.

Saltburn, as is well-known, has for long ministered to the health and pleasure of the very large populations of the various towns on the north-east coast, especially Stockton, Darlington, and Middlesbrough. The discovery of salt, however, at the last-named town has been a most fortunate event for Saltburn, for now it finds itself on the same footing as Droitwich and Malvern by the recent erection of magnificent baths at a cost of £5000, and these were opened on the 11th inst. amidst much rejoicing. The baths are most complete, and fulfil every requirement, from swimming and bathing as an exercise to the more special modes known as "cures." The swimming bath, it may be mentioned, is 75 ft. long by 43 ft. broad, and is supplied directly from the sea by special pumping apparatus, but it is likewise kept at a tepid temperature by hot-water pipes laid along the bottom of the bath, so that sea bathing can be carried out at all seasons. The sulphur baths are also well contrived, while the brine is conveyed in tanks by rail, a few miles distance from Middlesbrough. At the opening ceremony it was believed by all that now, with its beautiful gardens, majestic cliffs, unrivalled sands, and ocean prospect, Saltburn may claim a foremost position amongst seaside health resorts.

Ripon Hospital Demonstration.

Ripon, I believe, is the smallest city in England as regards population, but it is still by no means behind in charitable public spirit, as evidenced by the demonstration made last Sunday by the various friendly societies in aid of the Ripon Cottage Hospital and Jepson's Hospital. The procession was headed by the city band, and was joined by the Mayor and corporation on its way to a special service at the cathedral.

Stockton.

At the last meeting of the Stockton corporation, sitting as a sanitary authority with regard to influenza, it was stated to be still spreading, and seven deaths had been in the last fortnight certified as primarily due to it, and there was a large increase in the deaths from diseases of respiratory organs, no doubt also due to influenza. A discussion took place on the propriety of omitting continued fever from the list of diseases requiring notification; but the medical officer properly asked that it should be retained, and showed that some cases of typhoid fever did not manifest their type for about a fortnight, and were continued fever not to be notified it would leave the door open to the non-reporting of typhoid fever.

Pauperism in the Northern Poor-law District.

Mr. Knollys, inspector for the Northern Poor-law District, which includes Cumberland, Northumberland, Durham, and the North Riding, has presented his usual annual statistics, which show that the total number of paupers in the district in the first week of January, 1890, was 36,959, and the number in the corresponding week of 1891 was 35,315. In-door pauperism shows a slight increase. On the other hand, out-door pauperism shows a decrease.

Sunderland Nursing Institute.

Mr. Arthur Laing has sent to the honorary secretary of the Sunderland Nursing Institute the very handsome donation of £100, accompanied by a letter expressing his appreciation of the valuable services rendered by nurses from the institute during the late visitation of sickness at his house. Mr. Laing desires that one-half of this sum should be devoted exclusively to nursing amongst the poor.

The Will of Mr. J. Bainbridge Fife, F.R.C.S.

The will of the late Mr. Joseph Bainbridge Fife, F.R.C.S., has been proved, leaving a personalty of over £28,000. After providing for certain legacies and annuities, he directs the proceeds to go to the purchase of real estate in the north of England or Scotland, to be settled on his nephew, but so that in the event of any tenant for life becoming entitled to the Whitehill estate under the will of Mr. John Cookson the succession to Mr. Fife's estate shall shift to the person next entitled.

Darby and Joan!

A discussion as to aged couples in the workhouse having special rooms allotted to them took place at the Middlesbrough board of guardians, and it came out that the board were compelled, should the couples desire it, to provide apartments, but, as a matter of fact, they never desired this accommodation, but preferred to live apart!

Newcastle-on-Tyne, May 20th.

EDINBURGH.

(FROM OUR OWN CORRESPONDENT.)

Post-graduate Course in Edinburgh.

IT has been decided to have a post-graduate course in Edinburgh at the end of September and beginning of October. Various important improvements are to be made in the course as a result of the experience of previous years and of communications received from some of those who attended former courses. It is proposed to make the clinical courses more definite, and also to more fully meet the wants of those attending for special subjects. An influential committee has been formed to arrange matters, and DRS. Alexander James and George Mackay have been appointed secretaries to the committee.

Edinburgh Health Returns.

It has been reported to the public health committee that the total number of deaths in the city during the month of April was 426, making the death-rate 18·56 per 1000. The average rate for the corresponding month during the previous five years was 17·97 per 1000. As regards age, 33·09 per cent. of the total were under five years, 21·83 per cent. between thirty and sixty, and 30·98 per cent. above sixty. The deaths from diseases of the chest numbered 161, and from zymotic diseases 39. There were 529 cases of infectious disease reported, which comprised 14 cases of typhoid fever, 10 of diphtheria, 95 of scarlatina, and 410 of measles. With the exception of last year this is the largest number reported in the month of April since 1886. The number of patients in the City Hospital was 173, comprising 1 suffering from typhus fever, 30 from typhoid fever, 8 from diphtheria, 61 from scarlatina, 24 from measles, 14 from whooping-cough, and 18 from erysipelas. The birth-rate for the month was at the rate of 29·58 per 1000. During the month 55,467 lb. of unsound meat were condemned. Of 310 animals condemned, 10 were affected with pleuro-pneumonia and 53 with tuberculosis.

The Edinburgh Water-supply.

As intimated by me last week, the engineers appointed to report and advise on the Edinburgh water-supply have sent in their report, and it has now been published. The report is a long and elaborate exposition of the conditions of the present supply. The authors point out that there is much waste, to check which it would be necessary to divide the city into districts and to have a Deacon meter for each, and, in addition, the water-fittings in very many of the houses would require to be replaced by new ones. But even were this done in a few years the supply would be short of the demand, and even now they say that if the season were exceptionally dry we should be short of water both this year and next year. They conclude that, under the circumstances, it is imperative for the Water Trust to proceed at once to provide for bringing in an additional supply.

Health of Edinburgh.

The mortality last week was 108, and the death-rate 20 per 1000. Diseases of the chest caused 38 deaths, and zymotic diseases 12. The intimations for the week were—typhoid fever 1, diphtheria 3, scarlatina 10, and measles 96.

Scottish Microscopical Society.

The seventh ordinary meeting of this Society was held in Edinburgh on the 15th inst., Professor Rutherford presiding. Mr. H. J. Stiles, M.B., read a paper on the Development of the Mammary Gland, giving the results of an elaborate investigation of its development in the human subject, the calf, pig, dog, rabbit, and other animals, which had convinced him that the secreting acini of the gland are developed from the epiblast, as Kölliker long ago stated, but which Dr. Creighton had endeavoured to disprove. The paper was illustrated by an elaborate series of microscopic specimens demonstrating the author's views. Mr. W. H. Barrett, M.B., gave a demonstration of some New Methods of Handling Paraffin Sections which he had devised and which will enable the microscopist to overcome embarrassing difficulties in a simple way. Professor MacFadyean gave a communication on Disseminated Necrosis of the Liver. Mr. Ballantine, of Lizars & Co., opticians, Glasgow, exhibited a new Photo-micrographic Camera made by him on the design of the late Mr. Schulze, whose skill as a photographer of microscopical objects is well known. The instrument is remarkably compact and apparently well adapted for the purpose He also exhibited his No. 2 Student's Microscope which he had made on the suggestion of the late Mr. Schulze. The instrument is designed to meet the requirements of the bacteriologist as well as the ordinary histologist.

Alleged Irregularities at Leith Hospital.

As reported in the newspapers here, the medical officer of health for Leith has submitted to the Town Council, as local authority, a report regarding Leith Hospital, in which it is pointed out that the directors of the hospital have set aside the oldest portion of the building for the reception of fever patients, and that the wards are not well adapted for the purpose. The wards provide accommodation for thirty-six patients—a number not sufficient for the population when epidemics occur. Not only this, but it is stated that the management of the department is not satisfactory, and in proof of this instances are given. In 1890 there was an outbreak in the burgh of scarlet fever, and three outbreaks of typhus. The first outbreak of typhus comprised thirty-one cases, and of these twelve at least caught the contagion within the hospital, six being patients under treatment for scarlet fever. These facts were brought under the notice of the medical officers of the hospital, and they recommended that in future no case of typhus fever be received into the hospital, but be sent direct to King-street Hospital. This recommendation was conveyed to the directors of the hospital, who notified the Council of it, but added that the directors had difficulty in seeing how typhus fever could be received into King-street Hospital, seeing it was reserved for small-pox patients. As a result of this, the medical officer reported the matter to the Public Health Committee, and they came to the conclusion that the typhus fever accommodation in the hospital and the method of managing such cases were not satisfactory. This was communicated to the hospital authorities, who asked for more information. The medical officer points out, in addition to the foregoing, that one night nurse attended the different cases in the fever wards, that the nurses were overworked, and that the system of disinfection for clothes was so faulty that two laundrywomen got typhus fever by washing the clothes of typhus fever patients.

May 9th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

DUBLIN.

Royal College of Surgeons.

THE annual elections for examiners were held on the 15th inst., when considerable changes took place as compared with the outgoing office-bearers. On Monday, June 1st, a President, Vice-President, Secretary, and Council will be elected for the ensuing year. Mr. H. Gray Croly, J.P., whose presidency expires, will seek re-election and will not be opposed, but a contest will ensue for the vice-presidency. Mr. Carte, Vice-President, it is rumoured, will not seek re-election, but I should not be surprised if he becomes the third candidate for the post. Dr. Cranny and Professor Theodore Stack will be candidates for the vice-chair. Dr. Cranny has not had a seat on the Council, but Professor Stack has been a member of Council for several years, and I expect will be well supported. For Council, the only new candidate that I have heard of is Mr. John Lentaigne, surgeon to the Mater Misericordiæ Hospital; but probably some additional names may be forthcoming.

University of Dublin.

On Friday, June 5th, the Council will nominate a Regius Professor of Surgery in the place of Mr. William Colles, resigned. There are, I understand, three distinguished Dublin surgeons candidates for the post, the duties of which are not very onerous; the remuneration is £100 a year.

Meath Hospital, Dublin.

There were 1310 patients in the wards last year, of whom 82 died, or a mortality of 6·76. The total average cost of each bed occupied for the year was £49 3*s.* 9½*d.*, something over 2*s.* 8*d.* per day. The large number of 4063 accidents were treated as extern patients. During the year the dispensary buildings were entirely remodelled; these are detached from the main building, and are very suitable for the purposes required.

Caution to Chemists.

A chemist was prosecuted last week, at the instance of

the Commissioners of Inland Revenue, for selling wine without a licence—viz., Liebig's extract of meat and malt wine, which on being analysed was found to contain 31·9 proof spirit and a small quantity of organic substance answering to Liebig's extract of meat, which was not recognised as medicine. A fine of £10 was inflicted.

Dublin Kyrle Society.

This is a branch of the London society, with similar objects. Briefly they are: To decorate by mural paintings, pictures, flowers, &c., workmen's clubs, hospital wards, schools, and other places of meeting for the working classes; to lay out waste grounds, encourage the cultivation of plants, and to organise a choir of singers to give oratorios and concerts to the poor. These and other objects have been largely utilised during the past year, and great credit is due to the members of the Society for their exertions and the interest they have shown on many occasions.

Dublin Ladies' Sanitary Association.

The annual meeting of this Association, which for the future will be known as the "Irish Health Society," was held last week. Lectures on hygiene, sewing classes, wood carving, window gardening, lessons on sick nursing, which were attended by 111 ladies, are some of the many objects which are carried out by the Health Society. The committee from the first have been anxious that hygiene should be taught in the National Schools, and in 1882 directed the attention of Sir P. Keenan and the Board of National Education to the matter. In 1888 it was made an extra subject for which result fees are paid, and the committee have now recommended the Board of National Education to introduce simple health lessons into the reading-books now under revision. The committee in their report refer to the sanitary defects of tenement houses which keep up the high death-rate of Dublin. They constitute a serious danger to the public health, and often cause outbreaks of disease, and are an injustice to the poor. The Health Society is thoroughly deserving of support.

Templemartin Dispensary, co. Cork.

The contest for a successor to the late Dr. Wall was a very keen one, and the canvassing of votes was carried on unremittently from the time the vacancy was declared until the day of election. There were four candidates, two of whom withdrew, and ultimately Mr. Meade of Ballinhassig was successful.

Royal Hospital for Incurables.

The amount expended last year for the new buildings came to £15,915, only one-third of which was supplied by donations, the balance being obtained by the sale of £2000 of stock, the use of bequests, and the transfer of £1700 from current account. The recent outlay, although it cost a considerable sum, was a necessity, and the friends of the institution should help the governors to restore the amounts taken from the investments.

Under the provisions of the Rabies (Ireland) Order of 1886 the guardians of the South Dublin Union have ordered all dogs to be muzzled in the South Dublin district.

BELFAST.

Death of Dr. Frazer.

It is with sincere regret I announce the death of Dr. Frazer, a well-known medical man, who practised in Armagh, where he died from congestion of the lungs on May 10th. Dr. Frazer qualified as L.R.C.P. & L.R.C.S.I. in 1868, and obtained the M.D. of Glasgow in 1881. He practised all his professional life in Armagh, where he was assistant surgeon to the county infirmary, medical attendant to the Macan Asylum for the Blind, consulting medical officer of health, medical officer to the union workhouse, and physician to Shiel's Institution. Dr. Frazer, who was only forty-three years of age at the time of his death, enjoyed a large share of the practice in Armagh and the surrounding districts, where he was extremely popular amongst all classes. He was buried in St. Mark's Graveyard, Armagh, on Wednesday, May 13th.

The Royal Hospital.

At a special meeting of the corporation of the Belfast Royal Hospital, held on May 18th, a resolution was passed conveying the warmest thanks of the friends of the charity to the Countess of Shaftesbury and her son for the munificent gift of a lease of the hospital for 10,000 years at the nominal rent of 2*s.* 6*d.* per annum. This gift is very valuable, as, the Royal Hospital having only a lease of eighteen years to run, the property, in the event of removal, was practically valueless, as no one would purchase such premises on such a lease; but by this gift there is now, subject to the approval of the Countess or her representatives, a very valuable property at its disposal. There are at present two schemes discussed for enlarging and improving the hospital. One is to obtain the splendid grounds and premises of the Belfast Charitable Society for a new hospital, that body being willing to move their habitation into the country if they are provided by the hospital authorities with sufficient means to take their inmates elsewhere. Another plan is to purchase the buildings immediately adjacent to the Royal Hospital, which are held in perpetuity by the Society of Friends, and to extend the hospital wards in that direction. Should either plan be adopted for the extension and rebuilding of the hospital, an Act of Parliament and plenty of money would be needed; but in the solution of this very pressing question the Hospital Board have been placed in a very different position to make terms by the splendid gift of the Countess and her son, the present Earl of Shaftesbury.

May 19th.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

The Microbes of Osteomyelitis.

As might have been expected, considerable prominence was given in the recent discussions of the French Surgical Congress to the microbian origin of diseases which come under the surgeon's observation. One of the most important contributions to our knowledge of the etiology of diseases, the causes of which have until recent times been involved in mystery, was made by Professor Lannelongue in connexion with acute osteomyelitis. Having investigated bacteriologically thirty-seven cases of this disease that have come under his notice during the last two years and a half, he found that the micro-organisms that excited the morbid process could be thus classified:—Staphylococcus aureus, twenty-one cases; staphylococcus albus, seven cases; both the preceding concurrently, one case; streptococcus, four cases; pneumococcus, two cases; Eberth's bacillus, two cases. The microscopical results were controlled in each instance by the reproduction by inoculation of the pure cultures of the same form of the disease in the lower animals. The following points of distinction were established between streptococcic and pneumococcic osteomyelitis: In the streptococcic form arthritis and erysipelas were common. There is a sudden elevation of temperature, a fall in the course of two or three days, rapid supervention of suppuration, the pus being almost serous in consistence. The skin soon assumes a red appearance, due to angeioleucitis. This variety occurs chiefly in very young children whose mothers have suffered from puerperal complications—in other words, streptococcic infection. In the two cases of pneumococcic osteomyelitis, the point of entrance of the micro-organism was not discovered; it is therefore probable that the infection occurred through the medium of the general circulation. In this form the joints are the seat of profuse suppuration, but they soon recover. In conclusion, Professor Lannelongue states that of these different varieties of the affection that due to the staphylococcus is the most serious, the pneumococcic form is the least dangerous, while that occasioned by the streptococcus takes an intermediate place.

Two Cases of Poisoning.

Two unfortunate therapeutical misadventures have lately occurred in France, each being in its way instructive and worthy of record. In one instance a medical man was held answerable for the accident; in the other case, a chemist had to suffer for his culpable ignorance. The facts are as follows: A practitioner having been called in by a young lady aged twenty, who was a prey to severe toothache, prescribed a wafer containing one milligramme ($\frac{1}{65}$th of a grain) of aconitine. The dose was no sooner swallowed than the unfortunate girl was seized with colic, and succumbed after a few days' suffering. The expert who made the necropsy diagnosed poisoning by an overdose of aconitine, and the medical man was fined 100 fr. for *homicide par imprudence*. In England aconitine is rarely, if ever, prescribed as an internal remedy, but in France it is not at all unusual to do so. Two varieties of aconitine are

met with—viz., the amorphous and the crystallised, the latter being four times more active than the former, the dose of which is stated to be from one to three milligrammes per diem. Professor Brouardel, who gave evidence in the above case, declared that the question of the dosage of this alkaloid was not yet properly settled, but that the French Codex sanctions the employment of the crystallised variety only. In view of the danger involved by confusing the one form with the other, the professor promised to bring the matter forthwith to the notice of the Académie de Médecine. In the other mishap, an infant of three months, affected with bronchitis, had administered to it as an emetic by the medical attendant a hypodermic injection of what should have been two centigrammes (about one-third of a grain) of apomorphine. Unfortunately, the chemist who had prepared the solution ordered happened to be "out of" apomorphine, and, being ignorant of the difference between the therapeutical properties of that drug and hydrochlorate of morphine, substituted the latter substance. The infant promptly responded to this medication by lapsing into a comatose condition, from which it never emerged. The chemist was sentenced to three months' imprisonment. I may perhaps be allowed to remark that the proper dose of apomorphine administered hypodermically as an emetic being, for the adult, from $\frac{1}{10}$th to $\frac{1}{4}$th of a grain, a dose of one-third of a grain is somewhat heroic for an infant of only three months.

A Patriotic Accoucheur.

The thinking section of the French public has for some years past been much exercised in its mind by the almost stationary condition of the population of this otherwise favoured land. The matter has been discussed at the Académie de Médecine for weeks past, and the discussion has resolved itself into an interchange of views concerning compulsory vaccination and revaccination, and the means of arresting the progress of typhoid fever. In other words, the Academy is of opinion that the best way to remedy the stagnation complained of is to put into operation prophylactic measures calculated to render less frequent epidemics of two of the most fatal maladies prevalent in France. Professor Tarnier, the President of this learned Assembly, opines, however, that encouragement of a more direct kind might have the effect of stimulating the procreative faculties of his compatriots. Acting upon the precept that charity should begin at home, he has appealed to the thrifty instincts of the peasants of his native parish, Arch-sur-Tille, by offering for each child born in that happy district between Jan. 1st and Dec. 31st, 1892, a prize of 100 francs. The village sage-femme ought to feel grateful to her eminent hierarchical superior for having taken a step which will probably have the effect of adding to her income during the coming year.

The Alcohol Bill in France.

In a recent lecture M. Jules Rochard, the well-known hygienist, calculates the loss, direct and indirect, entailed by the consumption of alcohol in France. The following are the figures he gives: Value of alcohol consumed (exclusive of duty paid), 128,298,384 fr.; loss of labour, 1,340,174,500 fr.; medical treatment and stoppage of work, 70,842,000 fr.; cost of maintenance of insane, 2,652,912 fr.; suicides and deaths from accidents, 1,922,000 fr.; cost of repression of crime due to alcohol, 8,894,500 fr.—total, 1,555,757,296 fr. M. Rochard calculates that the loss occasioned in England by the consumption of alcohol is not far short of double the above sum—viz.: 2,922,130,075 fr.

Paris, May 19th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Virchow on Koch's Discovery.

IN a recent debate in the Prussian House of Deputies on the granting of additional funds for Koch's Institute for Infectious Diseases, Professor Virchow said, among other things: "I have never expressed any opinion to my professional brethren on the fundamental value of Koch's method, simply because I do not know how such an opinion can be formulated. I have only communicated a series of personal observations, which have indeed been of service in directing attention to one part of the question, and have especially enforced the need for calm and objective study that is so requisite in these difficult subjects. Dr. Graf [a previous speaker] is still steeped in optimism. He has no right to speak of the importance of the matter till he has proved it, and it is, in fact, not proved. But it would be just as foolish if we, as pessimists, were to say, 'The matter is of no importance whatever; it is only a poison, a noxious substance.' The question has, in fact, been developed in unexpected directions, leading in many quarters to the hope that very striking results can be produced by those powerful measures—a hope which we cannot yet say has been annihilated. As a matter of fact, there is not a single case known in which any form of tuberculosis has been cured by this means. All cases which were for a while regarded as cured have afterwards been found to relapse; the improvements were merely temporary, such as often occur under other treatment. On the other hand, there is no doubt whatever that many serious dangers have been revealed, with regard to which I may claim some merit for myself. I have not yet seen any need to retract one word from that which I wrote at the end of January in compliance with a Ministerial request. It was, indeed, much worse than what Herr Graf seems to think. Nevertheless, from what I have just said, no doctor who feels called upon to make further trial of the remedy could by any possibility lay himself open to prosecution. The original trials were, in point of fact, made after results had been obtained in animals which seemed to justify the expectations that were raised regarding the discovery." It is said that Professor Koch is about to publish a third communication on his treatment of tuberculosis, and to make known the manner in which tuberculin is prepared.

Dr. Karl Schaedler.

The chemist, Dr. Karl Schaedler, who died here on the 25th ult., was a copious writer on theoretical chemistry and on technology. His principal writings were, "Chemico-Technical Investigations," a handbook of the technology of the fats and oils of the vegetable and animal kingdoms, a handbook of the technology of fossils, a guide to the chemistry of the hydrocarbons, "Numbers for Chemists," a treatise on precious stones, and a "Biographical and Literary Hand Lexicon of Chemists of Scientific Importance," published this year. Dr. Schaedler was only forty-eight.

Official Statistics of Suicide.

The number of suicides in Prussia in 1883 was 6171; in 1884, 5900; in 1885, 6028; in 1886, 6212; in 1887, 5898; in 1888, 5393, and in 1889, 5615. Of the suicides of 1889, 4430 were males and 1185 females—i.e., 31 suicides per 100,000 men, and 8 per 100,000 women. The number of suicides per 100,000 persons was 19 in 1888 and 1889, 21 in 1887, and 22 in 1886. The number of suicides in Berlin proper was 366 in 1886, 371 in 1887, 386 in 1888, and 425 in 1889. Twenty-five per cent. of the deaths by suicide in 1889 were ascribed to mental disease.

Karl Wilhelm von Naegeli.

Karl Wilhelm von Naegeli, who stood in the first rank among modern botanists, died on the 10th inst. at Munich. He was born in 1817, at Kilchberg, near Zurich, and studied first in Zurich, and afterwards in Geneva and Berlin. The teacher who influenced him most deeply was Lorenz Oken, who strengthened in him, he said, the "impulse to combine all that he learned, and to arrange it under general points of view." In Berlin he heard Hegel, of whose lectures he said that, "though he tried most earnestly, he failed to find anything intelligible or reasonable in the abstractions which were propounded." He graduated in 1841, just about the time when Schleiden, by the publication of his "Botany as an Inductive Science," opened a new era in botanical investigation. The central doctrine of Schleiden's work is the necessity of applying the inductive method in botany. In this endeavour Schleiden found one of his most zealous supporters in Naegeli, who had begun to teach as a private lecturer in Zurich. In 1844 they united as co-editors of the *Zeitschrift für wissenschaftliche Botanik*, which, however, lived only for three years. Naegeli was the first to carefully distinguish protoplasm from the other constituents of the cell, to draw attention to its importance in cell-formation, and to demonstrate its azotic nature. He showed that the cellular membrane, which had been overrated till then, must be reckoned among the secondary parts of the cell. Of equal importance was Naegeli's demonstration of the fact that every stem or branch, every leaf or other organ, has at its vertex a single cell, through the division of which, according to fixed laws, all the rest originate; so that the

origin of every tissue cell from that vertex cell may be proved. Naegeli remained at Zurich till 1852, when he was appointed ordinary professor at Frieburg, whence he went to Munich in 1858. It was about the time of his transference to Munich that the theory of molecular structure and growth by intussusception began to dawn upon him, a theory which he gradually developed into a comprehensive molecular theory of organic formations, and which has an important bearing on the origin of species. He spent the rest of his life in Munich, but was released from his professional duties some years ago.

The Munich papers have printed an appeal for contributions to a fund for the erection of a monument in honour of the late Professor von Nussbaum.

Berlin, May 18th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

American Medical Association.

THE forty-second annual meeting of the American Medical Association was held in Washington on May 5th to the 8th. The session was largely attended. The question of removing the publication of the Journal of the Association from Chicago to Washington was decided in favour of Chicago. The sense of the members had been obtained by correspondence, and there was an overwhelming response in favour of the former city. A committee was appointed to petition Congress in favour of the creation of a new executive department of public health, the chief of which should be a Cabinet officer. A meeting was called to consider the propriety of establishing a National Medical Temperance Society after the model of the British Society, and the movement was approved. The committee on the Rush Monument reported very slow progress, alleging that, instead of seven years, seventy times seven would be needed before Dr. Rush's memory could be perpetuated in imperishable bronze. The committee appealed by letter to 1700 physicians of Philadelphia, the native city of Dr. Rush, and received 160 replies; the cost of the appeal was $95, and the amount received was $155.50. The sections were well attended, and a large number of interesting papers were read and discussed. The Association is growing more and more vigorous in spite of the large number of special associations which are annually being organised.

A Cork in the Bronchial Tubes.

A clergyman of Brooklyn, holding in his mouth the cork of the vial out of which he was administering medicine to his child, was provoked to laughter by the child's acts, and lost his hold upon the cork. The cork was of considerable size, being about half an inch in diameter and an inch in length. He was seized with a spasmodic cough, which soon subsided. During the cough he could distinguish the up and down movements of the cork in the trachea. He passed a comfortable night, and on the following day (Sunday) preached twice. During the first service he had but little cough or disturbance; in the evening he coughed much more, without, however, interrupting his discourse. On the next day efforts were made to dislodge the cork, and for that purpose he was suspended by the feet. This means failed, and meantime there was evidence that the cork had descended into the left bronchus, and was there fixed, interrupting completely the entrance of the air into a large area of lung tissue. Tracheotomy was next performed, and efforts were made to seize the cork, but they failed. On the following day the wound was reopened and an instrument employed having a corkscrew extremity. This penetrated the cork, but was ineffectual in dislodging the foreign body. It was then proposed to exsect the ribs and cut through the bronchus; but the patient's condition became so doubtful that no further efforts to remove the cork were made. Death soon after followed, and at the necropsy the cork was found in one of the first divisions of the bronchus, swollen, and firmly impacted, with the large end upward. A small fragment had been detached by the corkscrew instrument.

A Railroad Corporation indicted.

An accident on the New York and New Haven railroad, in the tunnel in this city, by which several lives were lost, has led to an indictment of the Board of Directors by the grand jury. The accident is alleged to be due to deficient lighting of the tunnel. Much interest attaches to the case owing to the failure of the efforts that have been made to compel the company to properly light the tunnel. This is the second accident of the kind within two years.

Execution by Electricity.

Two murderers are under sentence of death by electricity, but these executions have been delayed by appeals to the higher Courts. The case has finally gone to the Supreme Court of the United States, where it may remain a long period before a decision will be handed down.

New York, May 10th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

McGill University Intelligence.

CONVOCATION of McGill University for conferring degrees in arts, science, and law was held on April 30th, Sir Donald Smith, Chancellor, presiding. Principal Dawson, in the course of a most interesting address, spoke of the possible founding by the Chancellor of a college for women, providing the training required for all the learned professions to which women may wish to devote themselves.—At convocation of the Queen's University, held in Kingston on April 29th, degrees were conferred, and the annual address delivered by the Chancellor, Mr. Sandford Fleming, C.M.G.—The annual report of the University of Toronto for 1890 appears as an appendix to the annual report of the Minister of Education for Ontario—the attendance in all departments was larger,—the number of candidates examined being 1290, of which 264 were in the department of medicine and 32 in that of dentistry. Reference, of course, is made to the deplorable calamity of Feb. 14th, 1890, and thanks acknowledged to the various classes of donors both in Europe and America for the many valuable contributions towards the restoration of the library and museum, and the hope is expressed that the building will be completed to permit of occupation at Michaelmas term this year. The Minister's report shows that of the 427 teachers in the high schools and collegiate institutes of the province 273 are University graduates, and of that number 179 claim Toronto as their *alma mater*.

Tracadie Lazaretto, N.B.

The report of the inspecting physician to this institution appears in the annual report of the Department of Agriculture for the Dominion, though why it and quarantine should be classed under this head it is difficult to understand. There certainly is work for a Dominion Department of Public Health through which legislation could be obtained in the direction suggested by Dr. Smith. On the last day of 1890 there were in the lazaretto eighteen patients, eight males and ten females, only one in the advanced stage of leprosy. Five deaths occurred, and four new patients were admitted during the year. These new cases came from the vicinity of the new focus of leprosy found last year below Caraquet, Gloucester County, New Brunswick. From Tracadie, so long prolific of the disease, no cases came for a period of two years. The doctor adds: "The disease seems to have disappeared from this settlement, and to persistent segregation I attribute the happy change." Two cases dismissed within the past few years, by reason of the disappearance of all external symptoms, he reports as remaining healthy, but they continue under supervision. Recommendation is again made with regard to the enactment of enforced examination of suspected cases and segregation of leprous persons as the only safeguards against the ravages of the disease.

Toronto, May 6th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Typhus and Relapsing Fevers.

THE provincial fevers, to which I referred in my last letter, are abating as the warm weather approaches, and this is partly due to the out-of-door habits of the peasants, who no longer spend the day and night cooped up in airless mud hovels with their women and their animals. During the last week of April eleven villages remained infected, scattered over four provinces, and eighty-three patients remained under treatment after a mortality of thirty-two during the month. This is comparatively satisfactory, for

it is less than half the mortality of March. Several cases of typhus fever have been admitted into Kasr-el-Aini Hospital, and thence transferred to tents in the desert. One of the cases came from a boys' school, and two women were sent from the city prison, but they have not been followed by other cases from these sources. Typhus fever has, until this year, been unknown among Europeans; but now a Greek doctor is suffering from it, and an English officer is said to have been unfortunate enough to have caught it.

Small-pox Reports.

Small-pox has been reported in April from five districts, with a total number of fifty-nine cases and five deaths. At this time of the year small-pox is liable to be confounded with chicken-pox, of which four cases have lately been seen at the hospital. The natives have no distinctive word for varicella, and call it either false small-pox, or the small-pox of the donkey.

Drainage of Cairo.

It is now sixteen months since Mr. Baldwin Latham submitted to the Government of Egypt his hydraulic scheme for draining the city of Cairo; but the officials have not yet decided whether to adopt or reject his plans. The native officials are quite content to do nothing, and it is useless to expect any action from them. The European advisers of the Government have been much occupied with financial, judicial, and police reforms, and require stimulating almost as much as the Egyptians. Individually, they allow that some drainage is urgently necessary; but the financial difficulties of raising a loan are very great, in consequence of its being feared that the European Powers would refuse their consent to a reform which is likely to redound to the credit of England and to enrich the pockets of English contractors.

English Language Prize Fund.

It has long been felt that English has been greatly neglected in the Government schools, and in cases where a foreign language was elected by the boys it has until two years ago been almost invariably French. But now the tide is turning; boys are eagerly placing themselves on the English side of the large schools, and, instead of the French having almost a monopoly, English is taught to-day in thirty-seven out of a total of forty-four schools; and though there are only five schools where the official languages are Arabic and English, compared to sixteen schools where boys are taught in Arabic and French, there are now seventeen schools where there are French and English masters in addition to the native teachers. This prize fund has already amounted to £150, all subscribed by English residents, and this is to be divided into small prizes for English in all the important schools of the country, £16 having been devoted to the students of the medical school. At the age of nine years a boy practically decides now whether he will learn French or English, and it is hoped that suitable prizes may have some effect upon his decision.

Porro's Operation.

Mr. Milton two weeks ago performed Porro's operation upon an extremely rickety, malformed woman; but the child was extracted dead, and the mother, who was throughout most difficult to manage, died within two days of peritonitis. Extirpation of a cancerous uterus by the vagina has also been done for the first time in Egypt by the same operator. The patient, who was a German, recovered after a sharp attack of fever, and has left the hospital relieved of her tumour, but still suffering from weakness and diarrhœa.

Rare Medical and Pathological Cases.

During a post-mortem examination on a child aged four months who died of broncho-pneumonia it was discovered that the small intestine, especially near the ileo-cæcal valve, was the seat of more than a dozen distinct grey Peyer's patches in an early stage of infiltration, together with many enlarged solitary glands. The child was brought dying to the hospital, and no history could be obtained as to temperature, diarrhœa, &c. This evidence of infantile enteric fever is of great interest in Egypt, where this fever is very common among European adults and very rare among Egyptian adults, where native doctors are unable to diagnose fevers, and where there is a mortality in Cairo alone during last April of 399 children under the age of five years, under the statistical headings of "gastritis, gastro-enteritis, and diarrhœa." The tremendous mortality of Egyptian towns is chiefly due to the high infant rate, and this is enormously increased during the hot months when the Nile is low. At another necropsy upon a surgical case, which died of pleurisy after excision of the lower jaw for a cystic enchondroma, it was noticed that the corpse was very anæmic, and a careful search was made for entozoa, with the following result:—Fifty anchylostomata duodenales were found attached to the jejunum, and sixty-eight others were discovered in the washings of the small intestine, besides three ascarides, three oxyurides, and no less than thirteen of Bilharz's distoma worms in the portal vein. There have lately been in the hospital wards five cases of mycetoma, or the fungous disease of India. This is apparently the first time that the disease has been noticed out of India. Three cases were in men, two in women, all in one foot, with enlarged superficial veins of that lower extremity, and enlarged femoral glands on the affected side. In Mr. Sandwith's wards there is a man suffering apparently from negro lethargy, the fatal sleeping sickness of the West Coast of Africa. He is always asleep excepting at meal times, and when being treated by electricity.

Capital Punishment.

An Albanian murderer was executed in Old Cairo at daybreak this morning by means of a seven-feet drop instead of the old-fashioned hanging by strangulation. Death was painless and instantaneous, and a necropsy, conducted by Dr. Keatinge at the medical school five hours afterwards, showed partial dislocation of the second and third cervical vertebræ.

Cairo, May 12th.

Obituary.

WALTER WILSON YOUNG, M.D.

DR. YOUNG, who died recently at the age of fifty-one, was born at Hamilton, near Glasgow. He studied at the University of Edinburgh, where he graduated as M.B. and C.M. in 1865. Shortly afterwards he settled in the town of Aldershot, where he pursued the active practice of his profession for over five-and-twenty years. His skill, especially in surgical and obstetrical cases, and his kindness and attention to his patients, of whatever station in life, won him the confidence and esteem of all classes. He held sundry public appointments, including those of parish medical officer and public vaccinator, and police surgeon. In 1878 he graduated as M.D., with a thesis on Diseases of Joints. About twelve months ago symptoms of Bright's disease began to develop, and although he continued in the full discharge of his professional duties, it was latterly with manifest difficulty that he performed them. An acute attack of nephritis in March last confined him to bed, and he never regained strength, but sank gradually, and died on April 30th.

WILLIAM BURNIE, M.D., L.R.C.S. EDIN.

THE subject of this brief memoir died on the 1st inst., at his residence, Houghton House, Bradford, in his seventy-sixth year. He was born in Dumfriesshire, and went to Bradford in 1836 as assistant to Messrs. Cooper and Douglas of Rawson-place, having just previously obtained his medical qualifications. On the death of Mr. Cooper he removed to London, where he practised successfully for fifteen years, and held the post of honorary senior physician to the Islington Dispensary, returning to Bradford to join the firm of Messrs. Douglas and Kay. Subsequently, on the retirement or death of these gentlemen, he conducted the practice alone until 1879, when he took his son, Mr. W. G. Burnie, into partnership. Dr. Burnie was the author of a series of articles on "Medical Reform," and some valuable treatises on the "Treatment of Pneumonia." He took an active interest in the movement which resulted in the throwing open of the medical appointments of the Bradford Infirmary to general practitioners. He was a permanent vice-president of the Yorkshire branch of the British Medical Association, of which he had also been president, and was three times president of the Bradford Medico-Chirurgical Society, and a Fellow of the Medical Society of London. He held several important medical appointments, and his loss will be felt by a large professional and scientific circle. He leaves a widow, two sons, and a daughter.

Medical News.

UNIVERSITY OF CAMBRIDGE. — At a Congregation held on May 14th the following degrees were conferred:—

Doctor of Medicine.—Edmund Carver, St. John's.

Bachelors of Medicine and Bachelors of Surgery.—Robert Alexander Bickersteth, Cecil Huntington Leaf, Trinity; Henry Greaves, Gonville and Caius; Frank Belben, Christ's; and John Edwards Creswell, Cavendish Hostel.

The following gentlemen have passed the Third Examination for M.B.:—

Ds. Attlee, J., John's.
Berkeley, G. H. A. C., Caius.
Bradford, Caius.
Cropper, Trinity.
Daniel, Trinity.
Devereux, Selwyn Hostel.
Dixon, Trinity.
Drake, Clare.
Edmondson, John's.
Glover, L. G., John's.
Grimsdale, Caius.
Kent, Trinity
Law, Christ's.
Ds. Lee, Cavendish Hostel.
Miller, Queen's.
Perkins, J. J., Emmanuel.
Phear, Trinity.
Roberts, L., Caius.
Senior, Queen's.
Simpson, H., John's.
Stack, Pembroke.
Troutbeck, Caius.
Wallace, non-collegiate.
Ware, John's.
Watkins, Caius.
Wilkinson, G. (sen.), Emman.

ROYAL COLLEGE OF PHYSICIANS IN IRELAND. — At the May examinations the following obtained the licences in Medicine and Midwifery of the College:—

Medicine.—William Greenwood, Robert Kerr Johnston, and Samuel Whitten.

Midwifery.—William Greenwood and Samuel Whitten.

The undernamed have been admitted Members:—

Thomas S. Cogan, William Robert Macaulay, Ignatius M'Donagh O'Farrell, Henry Shea, and Ross F. Maguire.

SWIMMERS' LIFE-SAVING SOCIETY.—The first public Lecture and Demonstration of the principles of Resuscitation and Life-saving will be given in the Swimming Baths attached to the Polytechnic, Regent-street, on Monday next, commencing at 8 P.M.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting of the President, Vice-President, and Council, held on May 15th, the following examiners were elected for the ensuing year:—Anatomy and Surgery: John Barton, F.R.C.S.; Sir William Stokes, F.R.C.S.; Robert L. Swan, F.R.C.S.; and William Thomson, F.R.C.S. Physiology, Histology, and Pathology: R. Glasgow Patteson, F.R.C.S.; and J. Alfred Scott, F.R.C.S. Chemistry and Physics: Robert J. Montgomery, F.R.C.S. Midwifery and Gynæcology: Samuel R. Mason, F.R.C.S. Ophthalmology: Arthur H. Benson, F.R.C.S. Dentistry: Daniel Corbett, jun., F.R.C.S.; Robert Hazelton, F.R.C.S.; George M. P. Murray, F.R.C.S.; Henry Gregg Sherlock, F.R.C.S.; William Stoker, F.R.C.S.; and Montgomery A. Ward, F.R.C.S. Public Health: Hugh Aughinleck, F.R.C.S.; D. Edgar Flinn, F.R.C.S.; R. Glasgow Patteson, F.R.C.S.; William C. Stubbs, B.L.; and John Charles Wilmot, C.E. Midwifery Diploma: Samuel R. Mason, F.R.C.S.; Jeremiah O'Donovan, F.R.C.S.; and William Roe, F.R.C.S. General Education: Frank J. Davys, F.R.C.S.; and Robert Morton, F.R.C.S.

PRESENTATIONS.—Mr. Fredk. A. Heslop, L.R.C.P., L.R.C.S.Edin., of Blackpool, has been presented by the Blackpool Ambulance Police Class in connexion with the St. John Ambulance Association with a silver-mounted claret jug, as a token of esteem and appreciation of his instructions on rendering first aid.—Mr. P. B. Stoney, L.R.C.P.Edin., M.R.C.S., of Millom, Cumberland, has received as a present from the members of the St. John Ambulance Association, Millom Centre, a handsome set of electro-plated fish knives and forks, as a testimonial of their goodwill and gratitude for his services to them on ambulance work.—Mr. Alfred Barber, M.B., C.M.Aberd., of Richmond, Yorkshire, has been presented by the members of the Richmond Branch of the St. John Ambulance Association with a gilt and oak timepiece, in acknowledgment of the value of his ambulance lectures.—Mr. G. H. Fosbroke, M.R.C.S., D.P.H. Camb., medical officer of health for Worcestershire, has been presented by the medical men practising in Stratford Combined Sanitary District with a handsome dining-room clock, as a token of their appreciation of the courteous manner in which he had for the past seventeen years performed the duties of medical officer of the district and of his high personal character.

HOSPITAL SATURDAY IN BIRMINGHAM.—The total amount received in this year's collection amounts to the grand sum of £10,241 15*s.* 7*d.*, as compared with £9374 9*s.* 5*d.* last year.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.—A member of the Council of Management of this hospital has undertaken to make a donation of £500 on the condition that a similar sum is forthcoming from some other well-wisher of the charity.

ACCIDENT TO A MEDICAL MAN.—As Mr. J. Leslie Callaghan, L.R.C.P. Edin. &c., of Colyton, was driving through Seaton last Tuesday his horse shied, and his carriage colliding with a butcher's cart, he was thrown out and his right leg was fractured.

NATIONAL HEALTH SOCIETY.—The Duke of Westminster has contributed £100, and increased his annual subscription to £20, in aid of the new and useful work in the suburbs of London and the provinces which the Society is inaugurating by lectures amongst the poor on home sanitation and other subjects of domestic hygiene.

INFECTIOUS HOSPITAL FOR CARDIFF.—The Cardiff County Council, at its meeting on May 11th, approved the recommendation of the Health and Port Sanitary Committee for the erection of an infectious hospital near the Ely Paper Mills, at a cost of £24,500. The plans had been prepared by the borough engineer.

WORKINGTON INFIRMARY. — Mrs. Curwen of Workington Hall has intimated to the committee of the infirmary her intention to contribute £500 towards the fund which is being raised to build a new wing. The gift is in memory of the late Mr. E. Darcy Curwen, her eldest son, who died from typhoid fever a few weeks ago at Constantinople, whither he had gone as honorary *attaché* to the British Embassy.

THE NEW INFIRMARY AT DERBY.—On the 21st inst. the Queen on her way to Balmoral Castle broke her journey at Derby, and, amid many manifestations of loyalty, performed the function of laying the foundation stone of the new Derby Infirmary. Her Majesty was received at the station by the Mayor, Mr. Alford Haslam, and by members of the Reception Committee. Lord Lathom, the Chamberlain, was present, and made the presentations to Her Majesty.

DISINFECTING THE HOUSES OF PARLIAMENT.—An attempt has been made to fumigate and render wholesome the chambers in which our senators discharge their important functions for the benefit of the country. Mr. Plunket informed the members on Thursday last that the House, the lobbies, and all the surrounding rooms used for official purposes, also the rooms used by members, including the tea-room and reading-room, the rooms occupied by Ministers and officers of the House, had been thoroughly fumigated with sulphur, and afterwards sprinkled with eucalyptus oil. The floors had been washed with carbolic soap, the cushions, carpets, rugs, and other movables, had been taken out and thoroughly cleaned. The library had been purified with a preparation of sulphur and camphor, which was, he believed, extremely efficient as a disinfectant, and which had no injurious effect upon the bindings of the books. A very powerful draught of air had been constantly kept going in every portion of the House and its precincts.

ROYAL METEOROLOGICAL SOCIETY.—At the usual monthly meeting of this Society, held on the 20th inst., the following papers were read:—(1) "On the Vertical Circulation of the Atmosphere in relation to the Formation of Storms," by Mr. W. H. Dines, B.A. (2) "On Brocken Spectres in a London Fog," by Mr. A. W. Clayden, M.A. During the dense fogs in February last, the author made a number of experiments with the view of raising his own "spectre." This he ultimately succeeded in accomplishing by placing a steady lime-light a few feet behind his head, when his shadow was projected on the fog. He then made some careful measurements of the size and distance of the spectre, and also succeeded in taking some photographs of the phenomenon. (3) "An Account of the 'Leste,' or Hot Wind of Madeira," by Dr. H. Copland Taylor. Mr. Shelford Bidwell, M.A., F.R.S., exhibited an experiment showing the effect of an electrical discharge upon the condensation of steam

TORBAY HOSPITAL: PROPOSED NEW BUILDING.—A meeting of the governors was recently held at the small bath saloon to receive the report of the weekly board, in compliance with a resolution adopted at the annual meeting held in January last, requesting the board to point out a suitable site for a new hospital, together with an estimate of the cost. It was now stated that the board believed the site would cost £2500, and £12,500 would be required for the building, to accommodate in the first instance fifty patients. After a prolonged discussion it was resolved to again refer the matter to the weekly board.

THE NEW DUFFERIN HOSPITAL, MEERUT.—Mr Lawrence, the Commissioner, laid the foundation stone on the 2nd ult. of this new hospital, in the presence of a distinguished company. The report, which was read by the honorary secretary, stated the progress of the Countess of Dufferin Fund Scheme in Meerut. The number of out-door patients treated up to that time had been about 13,500, and with the completion of this new building the sphere of usefulness of the institution would be greatly increased. The site had been obtained by the liberality of eight donors, and 20,000 rupees had already been collected in the district.

THE HARROGATE BATH HOSPITAL.—Mr. A. Cooke, the Mayor of Leeds, presided at an influential meeting in the Town Hall on the 1st inst., convened for the purpose of urging the claims of this institution on the inhabitants of the borough. The president, vice-president, and other officials connected with the hospital, attended. It appeared that the percentage of patients who went to the hospital from Leeds and its vicinity was far in excess of the contributions received by the charity from that town. The borough, in fact, was sending the maximum of patients and the minimum of subscriptions. A debt rests on the institution of £11,397. The result of the meeting was the appointment of a committee for the purpose of obtaining donations, and otherwise assisting the board, by locally furthering the objects of the charity.

GENERAL PRACTITIONERS' UNION.—A general meeting of the Executive Committee of the above Union was held on the 13th inst., Mr. George Brown in the chair. The following gentlemen were appointed District Secretaries:—A. Phillips Hills, M.R.C.S., for Battersea; Cecil A. Digby, M.D., for Staffordshire; and John Grout, L.R.C.P., for Worcestershire. The following registered medical practitioners were elected members of the Union:—Messrs. J. Adams, D. M. Barry, R. F. Benham, G. G. Bird, T. E. Bowkett, H. W. Brighouse, A. H. W. Clemow, C. A. Digby, E. O. Fountain, J. Godding, E. C. Greenwood, J. H. Griffin, J. Grout, J. H. Gwynne, P. Z. Hebert, A. P. Hills, W. H. Horsman, A. Hunt, H. J. Jones, R. W. Jones, A. Kisch, C. F. Knight, F. Lawrance, R. H. Lloyd, W. C. Luffman, W. Y. Martin, W. Moore, E. Norton, R. F. Owen, W. L. Penny, H. C. Pope, C. H. Sers, J. P. Simpson, P. J. Slevin, G. Stevenson, H. C. Strover, G. A. F. Tait, M. Townsend, C. A. P. Truman, and H. Walker.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on May 19th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	189	56	3	39	..	287	442
North-Western Hospital	139	39	..	11	1	187	443
Western ,,	131	13	..	14	1	159	224
South-Western ,,	151	26	..	8	1	186	340
South-Eastern ,,	143	16	..	20*	1	180	461
Northern ,,	144	14	..	..	..	158	480
Totals	897	161	3	92	4	1157	2391

SMALL-POX.—South-Eastern Hospital, 1; *Atlas* hospital ship, 35.

* Infant with mother.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALLAN, CHAS. J., M.B., C.M. Edin., has been appointed Medical Officer of the Burgh of Bonnyrigg, Midlothian.

BAILEY, J. HAROLD, M.B., Ch.B. Vict., has been appointed House Surgeon to the Manchester Southern Hospital for Women and Children, and to the Manchester Maternity Hospital, vice A. W. Senior, resigned.

BALLANCE, H. S., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

BLACK, W. A., M.B., C.M. Edin., has been appointed Medical Officer and Public Vaccinator for the Parish of Annan, Dumfriesshire.

BRODIE, THOMAS G., M.R.C.S., L.R.C.P., has been appointed House Physician to King's College Hospital.

BRODRICK, CHAS. CUMBERLAND, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Tavistock Rural Sanitary District, vice M. Williams, resigned.

CAMERON, ALEX., M.D., C.M. Glasg., has been reappointed Medical Officer of the Workhouse of the Caistor Union.

CLABBURN, C. H., M.B., C.M. Edin., has been appointed Medical Officer for the Kitton District of the Stamford Union.

HAWKINS-AMBLER, GEORGE A., L.R.C.P. Irel., M.R.C.S., has been appointed Medical Officer of Health for the Whitley Urban Sanitary District of the Huddersfield Union.

HISLOP, JOHN T., L.R.C.S., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer and Public Vaccinator to the Milton-Abbott District of the Tavistock Union, vice F. M. Williams, resigned.

HUTCHINSON, JOSEPH, L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Fawley and Exbury District of the New Forest Union.

LACK, T. L., M.R.C.S., L.M., has been reappointed Medical Officer of Health for the Forehoe Union.

MACKAY, A. W., M.B., C.M. Aberd., has been appointed Non-resident House Physician and Surgeon to the Aberdeen Hospital for Sick Children.

MACKENZIE, WM. L., M.B., C.M., D.P.H. Aberd., has been appointed Medical Officer of Health for the conjoined Counties of Wigtown and Kirkcudbright.

MACKINTOSH, A., M.D., L.F.P.S. Glasg., has been reappointed Medical Officer for Chesterfield.

MORRIS, J. J. N., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

MORTON, A. STANFORD, M.B., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Moorfields Ophthalmic Hospital.

MUDGE, JAS., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer for the Marazion District of the Penzance Union.

NELSON, R., M.D. Irel., M.Ch., M.A.O., has been appointed, *pro tem.*, Medical and Vaccination Officer to the Sheffield Workhouse.

OWEN, WM., M.R.C.S., has been appointed Medical Officer for the Wells-street Workhouse of the Parish of St. Matthew, Bethnal-green.

PLAYFAIR, HUGH, M.B., M.R.C.S., L.R.C.P., has been appointed Assistant Physician Accoucheur to King's College Hospital.

RAIMES, A., M.B., C.M. Edin., has been reappointed Medical Officer of Health for the York Rural Sanitary District.

SANDIFER, H. S., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

SPENCER, WALTER, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the East Retford Urban Sanitary District of the East Retford Union.

STEPHENSON, O. T., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fifth District of the South Stoneham Union, vice Symonds, resigned.

WADDELOW, J. J., L.S.A., has been appointed Assistant House Accoucheur to King's College Hospital.

WHEATLEY, JAMES, M.D., B.S. Lond., D.P.H., has been appointed Medical Officer of Health for Blackburn, vice Dr. Barwise.

WHITFIELD, ARTHUR, M.R.C.S., L.R.C.P., has been appointed Assistant House Physician to King's College Hospital.

WHITTINGTON, T. P., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Rural Sanitary District of the Neath Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House Surgeon. Salary £50 per annum, with board, washing, and lodging.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Honorary Pathologist.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Surgeon.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician. No salary. Board and residence and an allowance for washing. (Apply to the Secretary, at the Office, 24, Finsbury-circus, E.C.)

COUNTY ASYLUM, Whittingham, Preston, Lancs.—Assistant Medical Officer and Pathologist. Salary £200 a year, with board, lodgings, washing, and attendance.

COUNTY BOROUGH OF SHEFFIELD.—Medical Officer of Health for the Borough. Salary £500 per annum. (Apply to Mr. J. W. Pye Smith, Town Clerk, Sheffield.)

COUNTY OF ROXBURGH.—Medical Officer for the County. Salary £350, with allowance for travelling expenses.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House Surgeon. Commencing salary £80 per annum, with board and residence.

DUNSTABLE FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Resident Medical Officer. Commencing salary £180, rising £10 per annum to £220, with residence, garden, and conservatory (rates and taxes free). Conveyance provided. (Apply to the Hon. Secretary, Princes-street, Dunstable, Beds.)

GENERAL HOSPITAL, Birmingham.—Assistant Physician for three years. Honorarium £100 per annum. Also Honorary Surgeon.

GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Junior Resident Medical Officer for one year. Salary £80 per annum, with board and lodging.

GOLD MINING COMPANY IN LOWER SIAM.—Medical Officer. (Apply to T. M., care of Street & Co., 30, Cornhill, E.C.)

GUY'S HOSPITAL, S.E.—Five Assistant Dental Surgeons.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant House Surgeon. Salary £50 per annum, with residence, board, and washing.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Assistant Resident Medical Officer for six months. Salary £50 per annum, with board and residence.

HOSPITAL FOR WOMEN (LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants in both Out-patient and In-patient Departments.

LEAMINGTON AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Resident Medical Officer. Salary £200, £50 allowed for cab fare or towards horse and trap, midwifery fees, &c., with residence, coachhouse and stable, rent and taxes free. (Apply to the Secretary, 91, Queen-street, Leamington.)

M.D., care of P. Dixon, Esq., 13, Gray's-inn-square, W.C.—Assistant Medical Officer in a large Metropolitan Lunatic Asylum. Salary to commence at £100 a year, with board, lodging, washing, &c.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon. Board, apartments, and washing. No salary.

SALFORD UNION.—Assistant Medical Officer for the Union Infirmary, Hope, near Eccles. Salary £130 per annum, with furnished apartments in the Infirmary. (Apply to the Clerk to the Guardians, Union Offices, Eccles-new-road, Salford.)

ST. THOMAS'S HOSPITAL, S.W.—Resident Assistant Surgeon.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, Cavendish-square, W.—Honorary Physician.

STOCKPORT INFIRMARY.—Assistant to the House Surgeon for six months. Board and residence.

UNIVERSITY OF GLASGOW.—Assistant Examiner in Physiology. The annual fee for the Examinership is £30. (Apply to Mr. Clapperton, 91, West Regent-street, Glasgow.)

WORCESTER AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Assistant Medical Officer. Salary (without residence) £140 per annum, with a portion of midwifery fees, also £20 per annum for cab hire. (Apply to Mr. Gibson, Easy-row, Worcester.)

Births, Marriages, and Deaths.

BIRTHS.

AITKEN.—On May 14th, at St. Mary's, Ashton-on-Mersey, Cheshire, the wife of W. B. Aitken, M.B. and C.M. Edin., of a daughter.

BARSHAM.—On May 19th, at Holmesdale, Bagshot, Surrey, the wife of William O. Barsham, L.R.C.P. Lond., M.R.C.S., prematurely, of a daughter, stillborn.

CHILDS.—On May 13th, at Lindisfarne, Weymouth, the wife of Christopher Childs, M.D., of a son.

MCCALL.—On May 19th, at The Terrace House, Conisborough, Yorkshire, the wife of Anthony McCall, M.B., C.M., of a daughter.

PARKER.—On May 17th, at 7, Bloomsbury-place, W.C., the wife of Herbert Parker, M.R.C.S., of a daughter.

WRIGHT.—On May 6th, at Spring-gardens, Gainsboro', the wife of Mr. Henry Wright, Surgeon, of a daughter.

MARRIAGES.

COLE-BAKER—LIDDELL.—On May 13th, at St. Jude's, Southsea, Lyster Cole-Baker, M.B. T.C.D., of The Elm Trees, Southsea, youngest son of William Cole-Baker, of Ballydavid, Tipperary, to Jennie, eldest daughter of William Liddell, J.P., Banoge House, Lurgan, Ireland.

HENRY—GILBERT.—On April 16th, at St. George's Cathedral, Cape Town, Herbert G. Henry, L.D.S. R.C.S. Eng., Dental Surgeon, of King William's Town, Cape Colony, eldest son of George Henry, Esq., of Hastings, to Louise Blanche Gilbert, of Kilburn, London, England.

PERKINS-CASE—BISHOP.—On May 13th, at Craven-hill Congregational Chapel, Perkins William Perkins-Case, M.D., of Croydon, to Clara Lucas Balfour, widow of the late Walter Ross Bishop.

DEATHS.

HAINING.—On May 12th, at Foregate-street, Chester, William Haining, M.D., in his 47th year.

HIRST.—On May 9th, at the residence of his son, 30, Westbourne-grove, Scarboro', Charles Hirst, L.S.A., L.R.C.P. Ed., of Morley, Yorkshire, aged 61 years.

MACDONELL.—On May 18th, at his residence, Nevern-square, London, Dr. Ewen Macdonell (Inch), formerly of the H.E.I.C.S., last surviving son of the late Lt.-Colonel Archibald Macdonell, C.V., in his 86th year.

MARTIN.—On May 13th, at Queen Anne-street, W., Robert Martin, M.D. Cantab., in the 64th year of his age.

MONRO.—On May 18th, of influenza, Henry Monro, M.D., of Upper Wimpole-street, aLd Orchard Leigh, Bonchurch, aged 74.

SMITH.—On May 10th, at Bridge of Walls, Shetland, John Smith, L.R.C.P.E. & S., third son of the late Hugh Smith, Esq., Ferulester, Coleraine, Ireland, aged 35 years. Deeply regretted.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

ARNOLD, EDWARD, Warwick-square, Paternoster-row, London.
The Soul of Man: an Investigation of the Facts of Physiological and Experimental Psychology. By Dr. Paul Carus. Illustrated. pp. 458.

CHURCHILL, J. & A., New Burlington-street, London.
Guy's Hospital Reports. Edited by N. Davies-Colley, M.A., M.C., and W. Hale White, M.D. Vol. XLVII., being Vol. XXXII. of the Third Series. 1890. pp. 367.

CONSTABLE, T. & A., Edinburgh.
Atlas of Clinical Medicine. By Byrom Bramwell, M.D., F.R.C.P. Edin. Vol. I. Part I. 1891. pp. 48.

CORNISH, J. E., Manchester.
The Physical Signs of Cardiac Disease. For the use of Clinical Students. By Graham Steell, M.D. Edin. Second Edition. 1891. pp. 77.

DAVIS, F. A., Philadelphia and London.
Materia Medica, Pharmacology, and Therapeutics. By J. V. Shoemaker, A.M., M.D. Vol. II. Being an Independent Volume upon Drugs. 1891. pp. 1004. Price 19s.

EYRE & SPOTTISWOODE, Fleet-street, London.
University of London. The Calendar for the year 1891-92. Part I.: Charters, Regulations, Lists, &c. Price 3s.

HOEPLI, ULRICO, Milano.
Morfologia del Corpo Umano. Studi del Dott. A. De-Giovanni. 1891. pp. 424.

KEGAN PAUL, TRENCH, & Co., London.
General Physiology, or Physiological Theory of Cosmos. By Camilo Calleja, M.D. 1890. pp. 391.
The Inspection of Meat. By W. Wylde. With Coloured Plates. 1890. pp. 104.

LONGMANS, GREEN, & Co., London.
Quain's Elements of Anatomy. Edited by E. A. Schäfer, F.R.S., and G. D. Thane. In Three Volumes. Vol. I. Part II.: General Anatomy or Histology. Illustrated. Tenth Edition. 1891. pp. 431. Price 12s. 6d.

OLIVER & BOYD, Tweeddale-court, Edinburgh.
Notes on Surgery for Nurses. By Joseph Bell, M.D., F.R.C.S. Edin. Third Edition. 1891. pp. 156. Price 2s. 6d.

PENTLAND, YOUNG J., Edinburgh and London.
Diseases of the Digestive Organs in Infancy and Childhood. By Louis Starr, M.D. Second Edition. Illustrated. 1891. pp. 396.

STOCK, ELLIOT, Paternoster-row, London.
The Revelation of the Trinity. By S. R. G. McKinney, M.A. 1891. pp. 190.

STREHZ, THEODORE, M.D., Chicago.
The General Practitioner. By T. Strehz, M.D. 1889. pp. 460.

SWAN SONNENSCHEIN & Co., Paternoster square, London.
Our Canine Companions in Health and Disease. By J. Woodroffe Hill, F.R.C.V.S. 1891. pp. 297.

La Linfa de Koch en Dermatologia; por el Doctor Juan Azúa (Estab. Typog. de los Sucesores de Cuesta, Madrid, 1891). — Des Déformations Ostéo-articulaires consécutives à des Maladies de l'Appareil Pleuro-pulmonaire; par le Dr. Albert Lefebvre (F. Alcan, Paris, 1891).—Klinische Untersuchungen über Schrumpfniere (Inaugural Dissertation); vorgelegt von T. A. Zangger (A. Diggelmann, Uster-Zurich, 1891).—New Law and Life for Children, being the Report of the National Society for the Prevention of Cruelty to Children, presented May 12th, 1891 (published at the Society's Office, Harpur-street, Bloomsbury, London).—Twenty-third Annual Report of the New York Orthopædic Dispensary and Hospital. — The Dwellings of the Poor; Report of the Mansion House Council for the year 1890 (Cassell & Co., Limited, 1891); price 1s.—Deutsche Zeitschrift für Nervenheilkunde; Band I., Heft 1-2 (F. C. W. Vogel, Leipzig, 1891). — De la Tuberculose Mammaire; par le Dr. A. W. Roux (Henrie Stapelmohr, Genève, 1891). — Etude Clinique sur la Grippe Pandémique; par le Dr. H. A. Maillart (A. Stapelmohr, Genève, 1891). — Annales de l'Institut Pasteur, publiées sous le patronage de M. Pasteur; par M. E. Duclaux; No. 4, April, 1891 (G. Masson, Paris). — Therapeutisches Lexikon für Praktische Aerzte; herausgegeben von Dr. A. Bum; Lieferung 17-20: Schluss des Werkes (Urban und Schwarzenberg, Wien und Leipzig, 1891). — Supplement to a Text-book of Pharmacology, Therapeutics, and Materia Medica; by T. L. Brunton, M.D., D.Sc. (Macmillan & Co., London, 1891).—The History of the Study of Anatomy in Cambridge; by A. Macalister, M.D., F.R.S. (C. J. Clay and Sons, London, 1891); price 1s. — Medico-legal Experience in Calcutta; by S. Coull Mackenzie, M.D. (E. & S. Livingstone, Edinburgh, 1891). — Catechism Series: Anatomy; Part IV., Abdomen. (E. & S. Livingstone, Edinburgh, 1891); price 1s. net. — Manuale di Terapia Clinica delle Malattie Veneree, con Formolario Terapeutico-Ragionato; del Dottore Luigi Carusi (Stab. Tipografico dell' Iride, Napoli, 1891). — Influenza; von Prof. Dr. Drasche (Moritz Perles, Wien, 1890).—Statistique des Vaccinations pendant le Paroxysme Épidémique de 1889-90; par le Dr. Domingos Freire (Imberg and Lefson, Berlin, 1891). — Contribution to the Medico-Military History of Jamaica: "A Retrospect"; by Brigade Surgeon S. E. Maunsell, Medical Staff (Government Printing Establishment, Kingston, Jamaica, 1891). — Index Medicus, Authors and Subjects, Vol. XIII., No. 4, April, 1891 (Trübner & Co., and Lewis, London).

Medical Diary for the ensuing Week.

Monday, May 25.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. O. Sturges: Tuberculosis in Children.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. W. Lang: Conjunctival Diseases.
ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND (University College).—4.30 P.M. Specimens:—Prof. Thane: Two cases of Abnormal Muscles of the Leg.—Mr. Lawrence: Abnormalities of the Aortic and Pulmonary Valves. Papers:—Sir W. Turner: The Relations of the Dentary Arcades in the Crania of Australian Aborigines.—Prof. Cleland: Burial in Sand for Preparation of Bones.—Dr. H. Spencer: Ossification in the Head of the Humerus at Birth.—Dr. W. Griffith: A case of Congenital Malformation of the Heart with Transposition of the Viscera, in which the Condition was Diagnosed during Life (with specimen).—Mr. Lockwood and Dr. Rolleston: The Situation of the Vermiform Appendix (with specimens).

Tuesday, May 26.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.
LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Theo. Hyslop: Delusional Insanity and Moral Insanity.—Hospital for Skin Diseases, Blackfriars (the lecture will be delivered at the Examination Hall, Victoria Embankment): 5 P.M., Mr. J. Hutchinson: The Tinea Group (Cryptogamic Affections).
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Dr. Sheridan Delépine and Mr. C. T. Dent: On the Changes observed in Healthy Arteries and in Tendon Ligatures during the first four weeks after Ligation.—Dr. G. Thin and Dr. F. J. Wethered: Symptoms and Pathology of a case of Acute Inflammation of the Mucous Membrane of the Ileum from climatic causes.

Wednesday, May 27.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. Kingston Fowler: Clinical Demonstration in cases of Mitral Disease.—Royal London Ophthalmic Hospital: 3 P.M., Mr. J. B. Lawford: Atrophy of the Optic Nerve.

Thursday, May 28.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. O. Sturges: Broncho-pneumonia and its Relationships to Lobar Pneumonia and Empyema.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Buzzard: Selected cases of Disease of the Nervous System.—London Throat Hospital, Gt. Portland-st.: 5 P.M., Mr. G. C. Wilkin: The Common Forms of Disease of the Pharynx, Naso-pharynx, and Fauces.
BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Mr. Lawson Tait: Further Observations on the Method of Restoring the Perineum.

Friday, May 29.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. Kingston Fowler: Clinical Demonstration in cases of Aortic Disease.—Bacteriological Laboratory, King's College: 11 A.M. to 1 P.M., Prof. Crookshank: Tuberculosis, Human and Bovine (examination of Sputum).—Great Northern Central Hospital: 8 P.M., Dr. Galloway: Gastro-intestinal Tract.

Saturday, May 30.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. Theo. Hyslop: Clinical Demonstration.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 21st, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May 15	29·73	N.W.	54	46	107	61	47	..	Cloudy
,, 16	29·76	N.	48	41	89	50	40	·29	Cloudy
,, 17	29·77	W.	43	39	92	51	35	·02	Cloudy
,, 18	29·30	N.E.	41	40	71	44	40	·52	Raining
,, 19	29·59	N.W.	44	40	98	59	38	·18	Hazy
,, 20	29·74	S.W.	51	46	96	58	44	·02	Cloudy
,, 21	29·42	N.E.	45	44	54	50	43	·17	Raining

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

KOCH'S REMEDY IN URINARY TUBERCULOSIS.

IN a communication Mr. Hurry Fenwick corrects certain views which have appeared in his name in connexion with the use of tuberculin in renal and prostate tuberculosis. He summarises the dangers arising out of the method under the heads of (1) dangers from septicity, in regard to which he endorses Mr. Watson Cheyne's statement that septicity is a contra-indication to its use; (2) dangers from hæmorrhage, and (3) dangers from throttling of the conducting canals. He concludes by saying that the therapeutic value of the remedy is very doubtful in urinary tuberculosis, but in primary vesical tuberculosis "the injection would replace surgical interference." In primary renal or prostatic tuberculosis it should only be used "as a diagnostic agent to enable us in the former gland to differentiate between tuberculosis and calculous disease, and in the latter to distinguish the same from chronic inflammatory conditions induced by gonorrhœa."

Anglicanus.—Without doubt the antecedents of the lady should prove a bar to marriage, in the interests not only of probable offspring, but even of the lady herself.

F.R.C.P.—The *Monist*, Philadelphia.

"ENGLISH MEDICAL SERVICE IN THE LATE RUSSO-TURKISH WAR."

To the Editors of THE LANCET.

SIRS,—In reply to "Juvenal" in your last issue, I beg to say that English surgeons who served with the Turkish army during the Russo-Turkish War received medals and other decorations. As to their being allowed by the authorities to be used when wearing the uniform of Her Majesty's regiments, it appears to me to be very doubtful. As to civilians, unless at Court or a Levée, I do not think anybody would notice what they wore.

I am, Sirs, yours obediently,

May 20th, 1891. H.

A NEW DEVICE IN MEDICAL ADVERTISING AT SHEPHERD'S-BUSH.

LENGTH of practice in a neighbourhood ought to be a guarantee against all undignified and unprofessional ways of attracting attention. "Dr. J. W. Hilles," 5, Benbow-road, The Grove, Shepherd's-bush, sends round a printed circular, in which, not content with advertising his scale of fees, his various appointments, the fact that he was physician to the late Sir Mathew Wilson &c., he exceeds all other advertisers we have known in publishing a list of about thirty gentlemen practising in his neighbourhood, and boasts that he has been in practice longer than almost any medical gentleman practising in Shepherd's-bush. We can only hope that he has learnt more of the practice of medicine than he seems to have mastered of its ethics and of its methods.

Irez should consult the article on "Books" published in our Students' Number of Sept. 6th last.

Mr. J. Ingram.—The registration of medical students commenced in the year 1865.

Dr. J. Oliver.—Very shortly.

"AN EXPLOSIVE MIXTURE."

To the Editors of THE LANCET.

SIRS,—The experience of Dr. Grant in attempting to prepare a solution of potassium permanganate in glycerine is not new. I was told several years ago by a pharmaceutical chemist that at the time permanganate of potash first began to be used internally he had a prescription for pills of this salt, in which glycerine was named as the excipient. On crushing the small crystals in his mortar with the glycerine, my friend had a very pretty little explosion—an experience even more alarming than that of your correspondent. The explanation is simple. Danger with permanganate and glycerine arises from the same cause as that attending the admixture of nitric acid and glycerine. Both permanganate of potash and nitric acid are powerful oxidising agents, and the chemical affinity of glycerine for oxygen causes the two to work with so much energy as to produce heat and (under favourable circumstances) explosion. The same terms, I need hardly remark, would constitute an explanation in chemical language of the explosion of gunpowder, wherein the saltpetre (KNO_3) is the oxidising agent. Permanganates, being unstable, are always rather liable to produce rapid oxidation, as prescribers should remember.

Should no other correspondent point out the explanation, perhaps this may be of use to Dr. Grant.—I am, Sirs, yours obediently,

London, May 16th, 1891. T. B. RUSSELL.

To the Editors of THE LANCET.

SIRS,—The readiness with which permanganate of potassium gives up its oxygen to organic matter is well known; and, as a more sensational example than Dr. Grant's experiment given in your last issue, p. 1135, if a few drops of glycerine are dropped on a small heap of permanganate of potash crystals, after a few minutes the "affinity" will be so great that smoke and flame will be evolved. I saw this experiment in a chemistry class many years ago.

I am, Sirs, yours faithfully,

Eccles, May 18th, 1891. J. HEDLEY CROCKER, L.R.C.P.Lond., &c.

*** The action is no doubt a complex one, and appears to depend upon the quantity of permanganate. In the experiments tried in our own laboratory, when crystals were used in the way our correspondent describes, precisely the same results were obtained. The mixture became intensely hot, and the permanganate first assumed a blood-red, then a mahogany, and finally a deep brown colour. No gas, except steam, appeared to be evolved, but a very distinct acetone-like odour was noticed (formaldehyde, acetone?), along with traces of pungent acrolein. The permanganate crystals were not all expended, as on washing out the semi-solid mass the crystals were seen to be covered with a black compound, possibly an oxide of manganese. During the violent action a distinct crackling sound could be heard. When a strong solution of permanganate is mixed with glycerine, the action appears to be the same, but not so violent. With a weaker solution the mixture suddenly becomes solid, so that the tube may be inverted without losing the contents. With a still weaker solution a gradual discharge of the colour merely takes place, the solution becoming brown. Dilute sulphuric acid and permanganate were found to cause copious evolution of carbonic acid gas. Glycerine, when heated with solid caustic potash, it is well known, gives acetate and formate of potassium; and it may be that with an oxidising agent, as solid permanganate, the corresponding acids are produced and fixed by the oxides of potassium and manganese, which result from the reduction of the salt. This might explain the acetone-like smell which is evolved, as acetates when heated yield acetone, while formates yield formic aldehyde. On treating glycerine with weak alkaline permanganate, it is completely converted into carbonic and oxalic acid—a change which is so definite that a process for the estimation of glycerine is founded on this reaction. The change is thus represented: $C_3H_8O_3+8O_2=C_2H_2O_4+CO_2+3H_2O$. In alkaline solution oxalate and carbonate are, of course, formed. Glycerine and permanganates in any case, it would appear, are incompatibles.—ED. L.

THE ESTIMATION OF NITRATES IN DRINKING WATER.

DR. HARROW communicated to a recent meeting of the Chemical Society a simple and rapid method of estimating the nitrates in drinking water. The method depends on the reduction of nitric to nitrous acid by means of zinc dust and chlorhydric acid, in a very dilute solution, in presence of α-naphthylamine and sulphuric acid, the estimation being made by comparing the depth of the pink azo-colouration developed in the solution with that arising on similar treatment of standard nitrate solutions. A beaker containing 50 cc. of the water is placed on a sheet of white paper side by side with other beakers holding 50 cc. of standard solutions containing 1·0, 0·1, and 0·01 of nitrogen as nitrate per 100,000, and to each is added 10 cc. of a test solution, prepared by dissolving 1 gramme of α-naphthylamine, 1 gramme of sulphanilic acid, and 25 cc. of chlorhydric acid in about 200 cc. of water, boiling with a small quantity of animal charcoal, filtering, and making up to 500 cc. A very small quantity of zinc dust—7 to 8 milligrammes—is added to each beaker. If nitrate be present in the water, a more or less intense pink colour is developed, which may be compared, at the end of fifteen minutes, with that arising in the standard solutions. By diluting the water until the tint produced is judged to be of the same intensity as that of one of the standards—preferably the most dilute—a first approximation is arrived at, and the water having been diluted to the extent indicated by the results, a fresh experiment is made with this diluted water. When nitrites are present, the amount is estimated in a similar manner prior to the addition of zinc dust, and due allowance is subsequently made. The author quotes a considerable number of comparisons with the Crum method, which show that very satisfactory results are obtainable.

POISONING BY ŒNANTHE CROCATA.

To the Editors of THE LANCET.

SIRS,—As cases of poisoning from eating parts of this umbelliferous plant are very uncommon, I thought it might be well to record an instance.

A girl aged nine was found dead in bed on the morning of May 9th. She was loitering on her way back from school on the previous afternoon, and appeared to have eaten portions of the plant, including a leaf. She went to bed almost as soon as she got home without complaining of feeling ill. She half woke up in the middle of the night and muttered to her bedfellow something about feeling sick, dropped off to sleep, and never woke again. I examined the fibrous pulp and chewed leaf I found in the stomach and duodenum, and identified the plant as Œnanthe crocata. The mucous membrane of the stomach was heaped up into congested ridges, and the other post-mortem appearances corresponded exactly with those described in recent text-books on toxicology. Death apparently took place in twelve hours.

I am, Sirs, yours faithfully,

F. N. WILLIAMS, F.L.S.,

Brentford, May, 1891. District Medical Officer for Brentford.

H. P. R.—The County Council may, under Section 19 of the Local Government Act, 1888, "refuse to pay any contribution...." in any case in which a medical officer of health "fails to send" a copy of his annual report to the County Council; but nothing is said as to the date when such failure comes into operation. The Local Government Board, in an official circular issued by them on Oct. 16th, 1890, referring to a date when failure to send in such report to themselves should be regarded as having taken effect, said: "They will accordingly inform the County Council *prior to the end of October in each year* of the cases, if any, in which they propose to certify that any medical officer of health, any part of whose salary is repayable by the Council, has made default in sending to the Board the report and returns required by the regulations." The central authority therefore do not regard the default as having already taken place in the month of May; and we should advise that a copy of the annual report be at once transmitted to the County Council, with an explanation as to inadvertence, together with a reference to the circular of the Local Government Board, and a request that the County Council will reconsider their decision.

"A NEW AND SIMPLE FORM OF HYPODERMIC SYRINGE."

To the Editors of THE LANCET.

SIRS,—The syringe illustrated in your issue of the 9th inst., and described by Dr. Abraham, is not new in principle, and is an infringement of the patent of Messrs. Arnold and Son for a syringe which I suggested to them, and which was described and illustrated THE LANCET last year.—I am, Sirs, yours faithfully,

Portsmouth, May, 1891. T. FREDERICK PEARSE, M.D., F.R.C.S.

"AN UNUSUAL SYMPTOM IN MIDDLE EAR DISEASE."

To the Editors of THE LANCET.

SIRS,—I find Mr. Stewart, in his "Epitome of Diseases of the Ear," alludes to a similar distinct sound (see page 86, last paragraph), which might be the explanation in my case published last week. Will you kindly insert this in justice to Mr. Stewart? Yours faithfully,

Barnes, May 20th, 1891. R. LAKE.

MEETING OF CONVOCATION OF LONDON UNIVERSITY.

WE regret that in our report of the meeting of Convocation in our last issue the remarks of Dr. Pye Smith were, by an oversight on the part of the printer, not distinguished from those of the preceding speaker, Mr. Bompas, Q.C. This is the more to be regretted since the views of the two speakers on the question were directly opposed to each other. Mr. Bompas's remarks terminated with the sentence, "He would appeal to Convocation to reject the scheme, and thereby finally save their University," on page 1117, twenty-two lines from the foot of the last column. Dr. Pye Smith said that if the scheme was not accepted the whole matter would be left to the arbitrament of alien bodies. Their desire was that there should be one university &c., his remarks concluding with the words "anxious not to lower, but to raise, the medical standard."

FEES FOR AMBULANCE LECTURES.

To the Editors of THE LANCET.

SIRS,—In your issue of to-day "F.R.C.S." writes that "a lecturer only receives one guinea for each lecture delivered to a St. John Ambulance class and his travelling expenses." Surely, he means an examiner. I have delivered two courses of lectures, and have hitherto regarded the post of lecturer as purely honorary. If "F.R.C.S." can tell me where I can obtain a guinea for each lecture delivered, I shall be much obliged to him; so, I imagine, will a good many others who have conducted ambulance classes.

I am, Sirs, yours faithfully,
May 16th, 1891. F. E. N.

ERRATUM.—In our announcement last week of the death of Mrs. Brinton, the late Dr. Brinton was erroneously described as of St. Mary's Hospital, instead of St. Thomas's Hospital.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Hurry Fenwick, London; Dr. Griffith, London; Dr. Wright; Dr. Sedgwick Saunders, London; Mr. Beardmore; Mr. Herringham; Dr. Seymour Taylor, London; Mr. H. Love; Dr. Scatliff, Brighton; Mr. Ernest Clarke; Professor Rutherford, Edinburgh; Mr. R. W. Lloyd; Dr. Hugh Woods, Highgate; Mr. A. Duke, Dublin; Messrs. Brown, Gould, and Co., Leicester; Dr. A. J. Richardson, Brighton; Messrs. Oliver and Boyd, Edinburgh; Dr. F. L. Flick, Philadelphia; Dr. Bartley, Broken Hill, Australia; Dr. Handford, Nottingham; Messrs. McCorquodale and Co., Glasgow; Dr. J. Oliver, London; Dr. A. S. Ashmead, New York; Dr. Harvey, St. Leonards; Dr. Blenkinsop; Messrs. Lloyd and Co., Leicester; Mr. W. M. Davidson, London; Messrs. G. Street and Co., London; Dr. Bamgton, Filey; Dr. Mackay, Devizes; Dr. More Madden, Dublin; Mr. Ryan, London; Captain Stairs; Dr. Dole, Isle of Wight; Dr. E. Thompson, Omagh; Mr. Weddell, Newcastle-on-Tyne; Dr. Callaghan, Colyton; Mr. Trevail, Truro; Colonel Fennan, London; Mr. A. R. Edwards; Mr. N. H. Nixon, London; Mr. F. N. Williams, Brentford; Mr. J. H. Alderson; Mr. W. E. Matthews, Stawell, Vic.; Dr. Charpentier, Uxbridge; Dr. G. M. Cullen, Edinburgh; Dott. Luigi Carusi, Naples; Mr. Ainley, Halifax; Mr. W. J. Nixon, London; Mr. E. A. Barton, London; Mr. H. F. Pease, M.P., London; Mr. Darling, Kelso; Dr. Gilbert, Baden-Baden; Mr. Evans, Oswestry; Mr. Graham, Armagh; Miss Rogers, Cornwall; Mr. Evans, Swansea; Mr. Mivart, Chatworth; Mrs. Fenwick, London; Dr. Weed, Cleveland, U.S.A.; Mr. Harrman, Philadelphia; Dr. Branthwaite, Erdington; Mrs. Aldridge, Rochdale; Messrs. Stern; Messrs. Deacon and Co., London; Mr. Moorhead, Nottingham; Messrs. Blondeau et Cie., London; Mrs. Wallace, Bayswater; Messrs. Krohne and Sesemann, London; Mr. Hilliard, Aylesbury; Messrs. Knight and Co., London; Dr. Renton, Glasgow; Mr. Ridge, Enfield; Mr. Harper, Queenstown; Mr. Kirby, Leeds; Mr. Webster, Halifax; Mr. Randell, Devon; Mr. Andrew, Stockport; Mr. Mosse, London; Dr. McDougall, Cannes; Mr. Morton, Wingham; Dr. Dickson, Fulham; Dr. Tyson, Folkestone; Dr. T. F. Pearse, Portsmouth; Mr. Nicholas; Mr. J. H. Crocker, Eccles; Mr. Hornibrook, London; Pulsometer Engineering Co., London; L.R.C.S.I.; F. E. N.; A General Practitioner; Cardiff Infirmary; P. E. T., London; M.D., Edinburgh; Secretary, Derby Infirmary; Secretary, Liverpool Royal Infirmary; Secretary, Hanover Institute; Vicar, Leamington; Athol, London; Secretary, Dewsbury Infirmary; A. B. G.; Irex; M. O.; H.; H. P. R.; Bouillon Fleet Co.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Heslop, Hants; Mr. White, Dunstable; Mr. Hall, Plymouth; Messrs. Hogg and Son, London; Mr. Tyte, Minchinhampton; Mr. Nicholls, Bury St. Edmunds; Mr. Owen, Fishguard; Messrs. Hazell, Watson, and Co.; Mr. Yearsley, Crewe; Mr. Finlay, Longford; Mr. Moore, Miles Platting; Mr. Tully, Hastings; Mr. Wolfe, Cork; Messrs. Ross and Co., Belfast; Dr. Chippendale, Bayswater; Messrs. Maythorn and Son, Biggleswade; Mr. Crawshaw, Ramsbottom; Messrs. Mason and Co., Chelsea; Dr. McCall, Conisborough; Mr. Hutchinson, Upper Sunbury-on-Thames; Rev. Mr. Manby, Cornwall; Messrs. Bullock and Co.; Dr. Shiels, Dunbar; Mr. Feeny, Dudley; Messrs. Fletcher and Fletcher, Holloway; Mr. Robson, Moneymore; Messrs. Keith and Co., Edinburgh; Dr. Ashurst, Derbyshire; Messrs. Thomas and Co., Bristol; Mr. Adams, Rye; Mr. Stirling, Grays; Dr. Fitzgerald, Folkestone; Mr. Lonnon, Chiswick; Dr. O'Meara; Mr. Heywood, Manchester; Mr. Forjett, Lincolnshire; Dr. McAlister; Dr. Deane, Ellesmere; Mr. Lewis, Llandovery; Mr. Tasker, Sheffield; Dr. Hale, Chesterfield; Dr. Harris, London; Mr. Buller, Martley; Mr. Morton, Wingham; Mr. Shepherd, Wragley; Dr. Lawson, London; Mr. Ely, Abergavenny; Dr. Rickards, Birmingham; Mr. Davis, Maddox-street; Dr. Lloyd, Barmouth; Mr. Aitken, Cheshire; Mr. Ellis, North Wales; Mrs. Campbell, London; Mr. Bryden, York; Messrs. White and Son, London; Mr. Smith, Manchester; Messrs. Schweitzer and Co., London; Dr. Moore, Dublin; Dr. Randle, Devon; Dr. Main, Newbury; Dr. Hirst, Scarborough; Dr. Moore, London; Mr. Walker, Corwen; Mrs. Theobald, Leicester; Mr. Christian, Hammersmith; Alderson, Hammersmith; F.R.C.P., London; Smedley's Hydropathic Establishment, Derby; L. T., London; J. E., Swansea; Hollingbrook House, Littleborough; J. C. W., Manchester; Secretary, Worcester Lunatic Asylum; Cantab., London; M.D., Hanley; Secretary, North Staffs Infirmary; Yorkshire, London; Seaside, London; Winchcomb Union; Skilbeck, London; Surgeon, Devon; *Western Daily Mercury* Co., Plymouth; Medicus, Atherstone; Surgeon, Brighton; Ancoats Hospital, Manchester; J. W. P., London; Phosphates, London; High Shot House, Twickenham; M.R.C.S., London; T. O.; Express Dairy Co., Bloomsbury; Demos, London; Exchange, London; Yorkshire College, Leeds; Statim, Liverpool; R., London; M.A., London; X., St. Helens; Medicus, Burnley; Truth, London; Jaso, London; A. P., London; Statim, London; A. B., London; Nemo, London; P. P. C., London; M.R.C.S., Hastings; M.D. Edin., Fleet-street; Boaz, Manchester; Medicus, Sheffield; Tempora, London.

NEWSPAPERS.—*Bradford Observer, Sussex Daily News, Midland Evening News, Freeman's Journal, Birmingham Daily Post, Glasgow Herald, Dundee Advertiser, Le Figaro (Paris), East Anglian Times, Liverpool Daily Post, Guy's Hospital Gazette, Surrey Advertiser, Leeds Mercury, Bristol Mercury, West Middlesex Advertiser, Spectator, Yorkshire Post, Hertfordshire Mercury, Law Journal, Saturday Review, Windsor and Eton Express, Local Government Chronicle, Mining Journal, Weekly Free Press and Aberdeen Herald, Reading Mercury, Windsor and Eton Gazette, Labour World, Evening News and Post, Essex Standard, Cheltenham Examiner, Norfolk Standard, Hull Weekly News, Cornishman, Coventry Mercury, Cork Examiner, South Wales Daily News, Huddersfield Examiner, Alliance News, Scottish Leader, New Zealand Times, Millom News, Leith Burghs Pilot, Canterbury Journal, Luton Times, Accrington Gazette, Annandale Herald, Grimsby Observer, Scotsman, Devizes Gazette, Penrith Observer, Stirling Observer, Taunton Courier, Falkirk Herald, Banffshire Advertiser, Corriere D'Italia (Rio de Janeiro),* &c., have been received.

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